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of Engineers**

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# **Central Heating Plant Economic Evaluation Program, Volume 4: Coalfield Properties Information Data Management Program**

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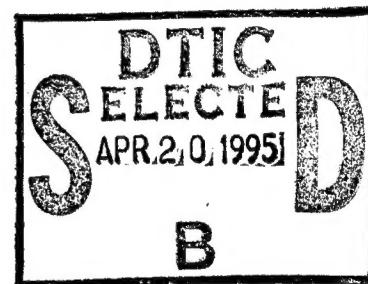
Public Law has directed the Department of Defense (DOD) to rehabilitate and convert its existing domestic power plants to burn more coal. Other Federal legislation requires DOD to use the most economic fuel for any new heating system.

This five-volume report discusses the Central Heating Plant Economic Evaluation Program (CHPECON), a computer program for screening potential new and retrofit steam/power generation facilities.

Volume 1 is the Technical Reference.  
Volume 2 is the User's Manual.  
Volume 3 is the Military Base Weather Information Data Management Program.  
Volume 4 is the Coalfield Properties Information Data Management Program.  
Volume 5 is the Emission Regulations Data Management Program.

CHPECON provides screening criteria to evaluate competing combustion technologies using coal, gas, or oil; detailed conceptual facility design information; budgetary facility costs; and economic measures of project acceptability including total life cycle costs and levelized cost of service.

The program provides sufficient flexibility to vary critical design and operating parameters to determine project sensitivity and parametric evaluation.



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## Foreword

This study was conducted for the Assistant Chief of Staff for Installation Management (ACS(IM)), Directorate of Facilities and Housing under the Coal Conversion Studies Program, which is administered by the Energy Policy Directorate of the Office of the Assistant Secretary of Defense, Production & Logistics, Energy Policy (OASD P&L/EP). Millard Carr is the Program Manager. Funding was provided under Military Interdepartmental Purchase Request (MIPR) No. W56HZV89-AC-01; Work Units "Coal Conversion Strategies for DOD" and "Enhancement of Existing Models," dated 20 November 1989. The technical monitor was Qaiser Toor, DAIM-FDF-U.

The work was performed by the Fuels and Power Systems Team (FEP), Energy and Utility Systems Division (FE) of the Infrastructure Laboratory (FL), U.S. Army Construction Engineering Research Laboratories (USACERL). Special acknowledgment is given to Lee Thurber, Rama Katz, and Mei-Yi Feng, CECER-FE for their efforts in organizing technical materials. Dr. David M. Joncich is Chief, CECER-FE, and Alan Moore is Acting Chief, CECER-FL. The USACERL technical editor was Gloria J. Wienke, Information Management Office.

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# 1 Introduction

## Background

The fiscal year (FY) 1986 Defense Appropriation Act (Public Law [PL]-99-190) Section 8110 directed the Department of Defense (DOD) to implement the rehabilitation and conversion of central heating plants to coal firing. The target set by this act was 1.6 million short tons<sup>\*</sup> of coal per year above the 1985 consumption level by 1994. The language further stated that 300,000 tons of this amount should be anthracite coal. The purpose of this Section was to offset decreasing anthracite coal use in Germany resulting from U.S. Army, Europe (USAREUR) installations connecting to district heating systems. The FY 1987 Defense Authorization Act (PL-99-661, Section 1205) also directed that the primary fuel source in any new heating system be the most life cycle cost effective. To assist in complying with these acts, the U.S. Army Center for Public Works (USACPW) requested that the U.S. Army Construction Engineering Research Laboratories (USACERL) provide technical studies and support for the Army's Coal Conversion Program.

## Objective

The objective of this project is to develop a series of screening and life cycle cost estimating computer models to determine when and where specific coal combustion technologies can be economically implemented at Army central heating plants.

## Approach

The approach for providing Coal Conversion Program support has been to develop tools useful for long range utility planning and for evaluating both the technical and economic feasibility of conversion. Cost estimating methods have been developed for building new coal, gas, or oil plants, and for retrofitting existing plants to coal firing capability. Supporting data bases have been developed covering installation-specific data (heating plant inventory, building inventory, weather data, energy usage),

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<sup>\*</sup> A metric conversion table is on page 20.

environmental regulations, coal supply information, and combustion equipment performance. The plant sizes examined in the model range from 50,000 to 600,000 pounds per hour (lb/hr) with individual boiler sizes from 20,000 to 200,000 lb/hr of steam or high temperature hot water (HTHW). The program is divided into two parts: the preliminary screening model and the detailed cost model. The screening model is used to initially evaluate each plant site and boiler technology option to produce a list of the promising locations and technology options. The screening model contains five distinct sections for evaluating new heating plants, retrofit heating plants, cogeneration facilities (in base-managed and third-party-managed forms), and consolidation of existing multiple boiler plants.

The new heating plant screening model is used to determine if a new coal fired heating plant can be built to replace an existing steam plant (150 pounds per square inch gauge [psig] saturated steam or equivalent hot water or 250 psig saturated steam). The boiler technology options include: stoker, bubbling fluidized bed, circulating fluidized bed, coal/water slurry, coal/oil slurry, natural gas, and #2 and #6 fuel oils.

The retrofit screening model is used to determine if the existing boilers can be retrofitted to fire coal or low-British thermal unit (Btu) gas supplied from a gasifier. The boiler options include: coal-water slurry, coal-oil slurry, micronized coal, slagging coal, bubbling fluidized bed, and stoker, as well as gasification.

The cogeneration screening model is used to determine if a new cogeneration steam plant is a feasible alternative for a military base heating plant. Medium pressure (600 psig, 750 °F) or high pressure (1300 psig, 1000 °F) plants can be analyzed. The boiler types considered are stoker, coal-oil slurry, coal-water slurry, bubbling fluidized bed, and circulating fluidized bed.

The consolidation screening model is used to determine if the military base should consolidate several individual heating plants into one main heating plant. This section assesses whether the steam distribution density is sufficient to consider consolidation as a practical option.

After the screening model has been executed, the user has the option to quit or to restart another screening model (for another option) or to continue to obtain a cost estimate for the selected facility. The costing model contains sections for a new heating plant, retrofit heating plant, cogeneration facility (base and third party), and consolidated facility.

The costing model provides conceptual facility design, capital installed costs of the conceptual facility, operational and maintenance costs over the life of the conceptual facility, and life cycle costs.

## Report Organization

This report discusses the Central Heating Plant Economic Evaluation Program (CHPECON) and is divided into the following five volumes:

Central Heating Plant Economic Evaluation Program, Volume 1: Technical Reference.

Central Heating Plant Economic Evaluation Program, Volume 2: User's Manual

Central Heating Plant Economic Evaluation Program, Volume 3: Military Base Weather Information Data Management Program

**Central Heating Plant Economic Evaluation Program, Volume 4: Coalfield Properties Information Data Management Program.**

Central Heating Plant Economic Evaluation Program, Volume 5: Emission Regulation Data Management Program

## System Requirements

CHPECON was developed using an 80286 personal computer with 640K memory, and was run using MS-DOS 3.3. The models should operate satisfactorily on 8088/80286/80386 processors with MS-DOS 2.0 and above. The program is written in dBase III Plus compatible language with some extensions. To provide the necessary speed and compactness, the program is distributed in compiled form using Nantucket's Clipper and allows stand-alone operation without requiring additional utilities.\*

## Scope

The purpose of this work is to investigate the feasibility of conversion of Army central heating plants to coal firing. The models developed are generally applicable to industrial or large commercial facilities. The economic evaluation program for screening and life cycle costs will serve as a tool to select and rank potential Army sites for coal conversion.

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\* dBASE III Plus is a registered trademark of Ashton-Tate, and Clipper is a registered trademark of Nantucket Software.



### **Mode of Technology Transfer**

The CHPECON program may be obtained by contacting the USACERL Fuels and Power Systems Team at 1-800-872-2375, extension 5551. The program will be transferred to Major Army Command Headquarters for further distribution. It is recommended that availability of this program and the information presented in this report be disseminated in a Public Works Technical Bulletin.

## 2 The COALFIELD Program

### Introduction

This data base program for coal field properties was developed to support an overall program for studying coal usage at continental U.S. Army bases. The program, COALFIELD, is written in dBASE III Plus and can be used as a stand-alone program or can be merged with the overall Central Heating Plant Economic Evaluation (CHPECON) program. The stand-alone capability of COALFIELD eliminates the need to reinstall all the CHPECON program files when updating the coal field properties files. In support of CHPECON, COALFIELD maintains the file from which the coal program draws its information about coal fields. In use, this file is scanned for suitability with the user-selected technology (e.g., type of coal, range of hemispherical temperatures), and for locations within a specified distance from a base.

The United States Geological Survey (USGS) was the source of the coal properties data. The original sample size consisted of over 6000 entries. Noncoal entries were deleted from this set, as were entries that were incomplete. An additional pass through the data was required to eliminate those entries that were outside the range of consideration for this research. Duplicate entries (defined as the same latitude and longitude) were then eliminated. The resulting database has over 2400 entries from among 31 states.

### Information Review

Figure 1 shows the standard display for the coal fields properties program. All the information used by the CHPECON program pertinent to a coal field is contained on one screen divided into logical sections. The area within the box is the coal field information. The area below the box is for the menu prompts and display of program messages. The information is accessed and updated through this menu. To select an option, press the capitalized letter in the option description.

**Edit field <E>** permits editing of the displayed coal field.

Coal field location		Last changed: 09/01/88	
State: TN - Tennessee		Location: PETROLEUMS ENERGY SERV INC	
County: MARION		Lat: 35°17'42"	Long: 85°32'15"
Proximate Analysis			
Moisture: 3.50 % (as delivered)			
---( dry basis )---			
Fixed Carbon: 64.70 %	Volatile: 26.30 %	Ash: 9.00 %	
Ultimate Analysis -- (dry basis)			
Carbon: 78.10 %	Hydrogen: 4.70 %	Nitrogen: 1.60 %	
Sulfur: 0.60 %	Oxygen: 6.00 %		
Miscellaneous			
Gross Calorific Value (dry): 13750 Btu/lb		Rank: B	
Hemispherical Temperature: 2804 °F (H=1/4W, reducing)			
Hardgrove Grindability Index: 0.0		Free Swelling Index: 4.5	
Code Number: W193643			
Note:			
Edit field / Add field / move Forward / move Backward			
Delete field / change Views / Print field list / Quit			
Option (E/A/F/B/D/V/P/Q) « »			

Figure 1. Screen display for detailed view of coal field information.

**Add field <A>** adds a blank field entry, then goes to the editing subroutine to allow entering the correct values for a new coal field.

**Move Forward <F>** displays the next coal field (as if flipping through a card file) until the end is reached.

**Move Backward <B>** displays the previous coal field (moving toward the beginning of the file) until the first entry is reached. The entries in the file are arranged by state.

**Delete field <D>** causes the field currently displayed to be eliminated from the file. The information that was entered is lost. As a check, you are asked to confirm the decision to delete a coal field.

**Change Views <V>** switches to a display that shows less information about an individual field but allows many fields to be displayed at one time. This is discussed in detail below.

**Print a field list <P>** allows you to print entries from the coalfield data base. Selecting this option brings up another prompt, asking if you want to print the displayed entry, the entries for a single state, all entries, or quit and return to the main screen without printing. If you request printing of the displayed field or all fields, the program begins printing. If you request to print by state, the program asks for the name or abbreviation of the state. After answering the

prompt for the state, the program begins printing. An example of the printed information is shown in Figure 2.

**Quit <Q>** returns you to the previous menu, if the program was run as part of the overall program set, or returns to the operating system, if the program was run as a separate module.

Changing the view from the detailed display of the coal field information brings up a display showing many coal field entries per screen, but less information about each coal field. An example of the display is presented in Figure 3. The menu options are the same as for the detailed display; however, they work somewhat differently.

"Editing a field <E>" requires you to first indicate which entry should be edited out of the list displayed, then proceeds as before. Use the up- and down-arrow keys on the

```

Coal field information printout for: MI - Michigan                                - 09/19/88

Location:                               Last changed: 09/01/88
County: INGHAM                          Lat: 42d 40m 53s  Long: 84d 16m 14s
Proximate Analysis                       Moisture: 13.30 % (as delivered)
  Fixed Carbon: 56.10 %  Volatile: 41.90 %  Ash: 2.00 % --- (dry basis)
Ultimate Analysis -- (dry basis)
  Carbon: 80.10 %  Hydrogen: 5.30 %  Nitrogen: 1.70 %
  Sulfur: 1.20 %  Oxygen: 9.70 %
Miscellaneous
  Gross Calorific Value (dry): 14310 Btu/lb  Rank: B
  Hemispherical Temperature: 0 F (H=1/2W, reducing)
  Hardgrove Grindability Index: 0.0  Free Swelling Index: 0.0
  Code Number: D172593
  Note:

Location:                               Last changed: 09/01/88
County: INGHAM                          Lat: 42d 40m 56s  Long: 84d 16m 14s
Proximate Analysis                       Moisture: 10.30 % (as delivered)
  Fixed Carbon: 56.90 %  Volatile: 40.20 %  Ash: 2.90 % --- (dry basis)
Ultimate Analysis -- (dry basis)
  Carbon: 78.00 %  Hydrogen: 5.20 %  Nitrogen: 1.60 %
  Sulfur: 1.30 %  Oxygen: 11.00 %
Miscellaneous
  Gross Calorific Value (dry): 14080 Btu/lb  Rank: B
  Hemispherical Temperature: 0 F (H=1/2W, reducing)
  Hardgrove Grindability Index: 0.0  Free Swelling Index: 0.0
  Code Number: D172594
  Note:

Location:                               Last changed: 09/01/88
County: INGHAM                          Lat: 42d 44m 56s  Long: 84d 45m 46s
Proximate Analysis                       Moisture: 18.60 % (as delivered)
  Fixed Carbon: 52.00 %  Volatile: 40.90 %  Ash: 7.10 % --- (dry basis)
Ultimate Analysis -- (dry basis)
  Carbon: 73.40 %  Hydrogen: 5.00 %  Nitrogen: 1.40 %
  Sulfur: 1.70 %  Oxygen: 11.40 %
Miscellaneous
  Gross Calorific Value (dry): 13100 Btu/lb  Rank: B
  Hemispherical Temperature: 0 F (H=1/2W, reducing)
  Hardgrove Grindability Index: 0.0  Free Swelling Index: 0.0
  Code Number: D172595
  Note:

```

Figure 2. Example of coal field information printout.

Coal Field Information Management Program			09/20/88
Condensed View of Coal Fields			
State	Rank	County	Location
PA	B	ELK	STRIP MINE
PA	B	ELK	STRIP MINE
TN	B	MARION	ALLEN COAL CO
TN	B	GRUNDY	FOUR SEASONS COAL CO
TN	B	MARION	PETROLEUMS ENERGY SERV INC
TN	B	BLEDSON	PIONEER COAL CO
TN	B	SEQUITZ	SOUTHERN ENERGY RES CO
TN	B	BLEDSON	LUCKY CUMBERLAND COAL CO
TN	B	BLEDSON	LAMB CREEK COAL CO
TN	B	BLEDSON	SAUNDERS COAL CO
TN	L	LAUDERDALE	STATE PRISON FARM
TN	B	ANDERSON	JACKSON MINING CO
TN	B	MORGAN	G&B COAL CO

---

Edit field / Add field / move Forward / move Backward  
 Delete field / change Views / Print field list / Quit  
 Option (E/A/F/B/D/V/P/Q)      « »

Figure 3. Screen display for condensed view of coal field information.

cursor keypad, then press "E" when the pointer is at the desired field. You can also quit from the editing pointer display back to the main menu. "Adding <A>" is the same in that a blank entry is created, then the program switches to editing the blank entry to place the information in the file.

Moving "Forward <F>" and "Backward <B>" moves up or down one screen at a time; since many coal fields are displayed, this allows quicker movement through the file.

"Deleting a field <D>" requires you to first indicate which entry should be deleted. Deleting in this view also requires a confirmation, as did deleting in the detailed view. "Changing Views <V>" in this view moves you back to the detailed view.

"Print a field list <P>" is the same as before, as is Quit <Q>".

### 3 Information Editing

The information displayed in the detailed view (Figure 1) is divided into logical sections within the box. The first section is the coal field's location. The location field should contain the actual name of the mine (preferred) or a description of the type of site. The last changed date is displayed, but is not directly changed. When a field's data is edited, or when it is first added, the last changed date is automatically updated to the current date in the computer system's clock. The latitude displayed is the north (assumed) latitude of the coal field in the format  $DDD^{\circ}MM'SS''$ , where DDD is in degrees, MM is in minutes, SS is in seconds. The longitude displayed is the west (assumed) longitude of the coal field in the same  $DDD^{\circ}MM'SS''$  format.

The next boxed-in area of the detailed view contains the coal's proximate analysis. The moisture fraction of the coal is for the coal as delivered, in percent, from the proximate analysis laboratory results. The next three values are for the coal on a dry basis, as noted on the screen. The values, in percent, are for the fractions of fixed carbon, volatiles, and ash in the coal. The total of these three values must equal 100 percent. If the sum of the values does not equal 100 percent, a message is displayed on the right side of the screen. If you ignored this, the program displays a message that it cannot proceed when the data screen is completed, instead of the prompt for whether the information entered should be accepted.

The next boxed-in area is for the ultimate analysis of the coal, on a dry basis. The values, in percent, are for the fractions of carbon, hydrogen, nitrogen, sulfur, and oxygen in the coal. These five values and the ash value should total 100 percent. In the same manner as the proximate analysis, if the values do not equal 100 percent, a message is displayed on the right side of the screen. If this message is ignored, the program stops at the end of the entries with the longer message that the ultimate analysis values do not total 100 percent. It is possible that both the proximate and ultimate totals will not equal 100 percent due to an erroneous ash value entry.

The values in the miscellaneous box describe the coal in more general terms. The gross calorific value (heating value on a dry basis) is in Btu/lb of coal. The expected range is from 5,000 to 20,000 Btu/lb. The rank is the general type of coal. Acceptable values to the program are: B (bituminous), SB (sub-bituminous), L (lignite), A (anthracite), and SA (semi-anthracite). The program continues to prompt until one of

these values is entered. The hemispherical temperature is the value defined by height =  $(0.5) \times (\text{width})$  in a reducing environment, in degrees Fahrenheit. Acceptable values are from 1000 to 3500 °F. The Hardgrove Grindability Index has an acceptable value range of from 20 to 120. The Free Swelling Index has an acceptable value range of from 0 to 9. The code number is a unique number given to the entry for later identification; it is alphanumeric, with a check made on the uniqueness of the entry. In the case of the original data, the code number is the USGS number assigned to the entry. The note contains any additional information that should be recorded about the coal field. For example, the note could indicate that this coal field is the one used by a certain base, or that the reserves of the coal field are limited. Anything that may be useful in deciding to use a coal field should be placed in the note space.

For some of the information about a coal field, a value of 0 can be entered instead of a value in the expected range. This has been provided for the times when some of the values are not yet known. However, the proximate analysis, the gross calorific values, and the latitude and longitude must be entered. Table 1 summarizes the error checking in the program.

**Table 1. Summary of error checking on entered data.**

Information	Acceptable Values
State	Must be one of the 50 states.
Location	No error checking implemented. Can be a blank entry.
County	No error checking implemented. Can be a blank entry.
Latitude	The latitude must be in the format DDD°MM'SS", where DDD is in degrees, MM is in minutes, SS is in seconds. DDD must be in the range from 25 to 72. MM and SS must be a value of 00 to 59, inclusive.
Longitude	The longitude must be in the format DDD°MM'SS", where DDD is in degrees, MM is in minutes, SS is in seconds. DDD must be in the range from 63 to 172°. MM and SS must be a value of 00 to 59, inclusive.
Moisture	Moisture fraction of the coal should be in the range of 0 to 60 percent, inclusive.
Fixed Carbon	Fraction of fixed carbon in the coal must be in the range of 20 to 99 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Volatiles	Fraction of volatiles in the coal must be in the range of 0 to 60 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Ash	Fraction of ash in the coal must be in the range of 0 to 50 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Carbon	Fraction of carbon can have a value from 20 to 99 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.

Information	Acceptable Values
Hydrogen	Fraction of hydrogen can have a value from 0 to 30 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Sulfur	Fraction of sulfur can have a value from 0 to 20 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Oxygen	Fraction of oxygen can have a value from 0 to 50 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Nitrogen	Fraction of nitrogen can have a value from 0 to 30 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Gross Calorific Value	Heating value must be in the range of 5,000 to 20,000 Btu/lb, inclusive.
Rank	The rank, or type, of the coal must be one of the following five values: B = bituminous SB = sub-bituminous L = lignite A = anthracite SA = semi-anthracite
Hemispher. Tempera- ture	Hemispherical temperature of the coal (defined as height = 0.5 x width) is in the range of 1000 to 3500 °F, inclusive, or 0 if no value is known.
Hardgrove Grindability Index	The index must be in the range of 20 to 120, inclusive, or 0 if no value is known.
Free Swelling Index	The index must be in the range of 0 to 9, inclusive, with 0 either a real value or representative of no value know.
Code Number	The code number must be a unique entry in the data base. It cannot be a blank entry.
Note	No error checking implemented. Can be a blank entry.



## 4 Program and Data Listing

The listing of the program segments is contained in Appendix A of this report. A listing of the information stored in the coal field data base from the USGS data is contained in Appendix B of this report. The file structure of COALFIEL.DBF is shown in Table 2. The individual data base fields are updated through the coal field information screen, as described earlier.

Two data base fields used by CHPECON have been added that specifically require storing information about coal fields. SLCTD (selected) is a logical field that is set TRUE or FALSE based on whether the coal field has been selected by CHPECON based on the distance it is from the military base that is being studied. DIST FROM is the distance in miles that the coal field is from the military base. This value is displayed as part of the acceptable coal fields display when you are given the opportunity to review before selecting one coal field for use of its properties in the emissions and technology analysis of CHPECON.

**Table 2. Structure for data base file COALFIEL.DBF.**

Field	Field Name*	Field Type	Field Width	Decimal Width
1	State	Character	2	
2	County	Character	23	
3	Location	Character	30	
4	Last Chg	Date	8	
5	Latitude	Numeric	7	
6	Longitude	Numeric	7	
7	Moisture	Numeric	6	2
8	Volatile	Numeric	6	2
9	Fixed Crbn	Numeric	6	2
10	Ash	Numeric	6	2
11	Rank	Character	5	
12	HHv Dry	Numeric	6	
13	Hrdgrv Grd	Numeric	5	1
14	Free Swell	Numeric	4	1

15	Aft S	Numeric	5	
16	Carbon	Numeric	5	2
17	Hydrogen	Numeric	5	2
18	Sulfur	Numeric	5	2
19	Oxygen	Numeric	5	2
20	Nitrogen	Numeric	5	2
21	Code No	Character	20	
22	Cmmnt	Character	65	
23	Slctd	Logical	1	
24	Dist From	Numeric	5	

*Field	Description
Location	Either the name of the mine or a description of the type of mine.
County	County in which the coal field is located.
Code Number	A unique number given to the entry for later identification. (In the case of the original date, this is the USGS number assigned to the entry.)
Latitude	The north latitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Longitude	The west longitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Rank	The rank, or type, of the coal: B = bituminous SB = sub-bituminous L = lignite A = anthracite SA = semi-anthracite
Htg Val	Heating value of the dry coal in Btu/lb.
Last Chg	Date the entry was last changed.
Moisture	Moisture fraction of the coal as delivered, in percent, from the proximate analysis.
Volatiles	Fraction of volatiles in the coal on a dry basis, in percent, from the proximate analysis.
Fixed Carbon	Fraction of fixed carbon in the coal on a dry basis, in percent, from the proximate analysis.
Ash	Fraction of ash in the coal on a dry basis, in percent, from the proximate analysis.
Carbon	Fraction of carbon in the coal on a dry basis, in percent, from the ultimate analysis.
Hydrogen	Fraction of hydrogen in the coal on a dry basis, in percent, from the ultimate analysis.

*Field	Description
Sulfur	Fraction of sulfur in the coal on a dry basis, in percent, from the ultimate analysis.
Oxygen	Fraction of oxygen in the coal on a dry basis, in percent, from the ultimate analysis.
Nitrogen	Fraction of nitrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Hardgrove	Hardgrove grindability index of the coal.
Free Swell	Free swelling index of the coal.
Hemi Temp	Hemispherical temperature of the coal, in °F; defined as the softening temperature at which $H=1/2W$

## 5 Program and Data Installation

The stand-alone nature of COALFIELD requires that it be installed as an independent entity before use, even if it will be used only as part of CHPECON. One disk contains the programs and empty data files for COALFIELD. The installation consists of copying the disks to a suitable subdirectory on a hard disk of the computer that will be used. When the COALFIELD program is run, it will automatically create the index files it needs. However, at this point the index files will be blank.

The COALFIELD data base itself is larger than a standard 360k floppy disk when it contains the information generated in this project. Because of this, an additional program has been provided that manages the process of handling small files that will fit on 360k floppies, called COALBLD. COALBLD is a standalone program with a menu of three options:

**Adding** to COALFIEL.DBF will cause COALBLD to look for data files named COALFL##.DBF, where ## can vary from 1 to 99. COALFIEL.DBF can be optionally cleared (previous information removed) before adding, and index files are rebuilt if any additions are made. COALBLD will use the data structure of the first data file that is found to create COALBLD.DBF if COALFIEL.DBF is not initially present. COALBLD will look only in the current drive/directory for COALFIEL.DBF and COALFL##.DBF.

**Splitting** COALFIEL.DBF will produce the small data files that are looked for by COALBLD during the adding process. COALBLD will inform you if it cannot find COALFIEL.DBF. It will erase any previous small data files, leaving only the current ones on the directory.

**Quitting** will end COALBLD.

To use COALBLD to place all available data into the COALFIEL.DBF data base file, first copy all available disks to the directory where COALFIELD is installed. Then start COALBLD and select the adding option. To split the COALFIEL.DBF apart, start COALBLD and select the splitting option. The individual files can then be copied to floppies or other media for transfer to another system.

## 6 Running COALFIELD

To run COALFIELD as a stand-alone program, you must know the program's environment.

1. If run under dBASE III or a compatible interpreter (like FoxBase\*), start dBASE, then enter the command **DO COALFIEL**, and press the <RETURN> key.
2. If run as a compiled program (like Clipper\*\*), from the DOS prompt (or similar), enter the command **COALFIEL**, and press the <RETURN> key.

Exiting the program will return you to the level that called it—the dot prompt if in dBASE or FoxBase, and the DOS prompt if in Clipper.

### Metric Conversion Table

1 in.	=	25.4 mm
1 sq in	=	6.452 cm <sup>2</sup>
1 psi	=	6.89 kPa
1 psi	=	89.300 g/cm <sup>2</sup>
1 lb	=	0.453 kg
1 lb/hr	=	0.126 g/s
1 cu ft	=	0.028 m <sup>3</sup>
1 sq ft	=	0.093 m <sup>2</sup>
°F	=	(°C + 17.78) × 1.8
1 Btu/lb	=	0.556 cal/g
1 ton	=	907.185 kg

---

\* FoxBase is a registered trademark of Fox Software, Inc.

\*\* Clipper is a registered trademark of Nantucket Software.

## **Appendix A: Program Listing**

01-11-89 15:00:00 CHKSTAT2.PRG  
Wed 01-11-89 15:15:18

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of 6  
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```
*****
*- CHKSTAT2.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry, detailed analysis
*****
*
* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stln=LEN(st)
stlst=""
stn=""
ok=.f.

* if entry is two characters,
* check to see if it is proper state abbreviation
+---IF stln=2
|   DO idstate
+---ENDIF

* if state found, stlst has name, routine can return from here
+---IF LEN(stlst)>0
|   stn=st
|   ok=.t.
|   RETURN
+---ENDIF

* if length is 0 (no entry), set name to special code
+---IF stln=0
|   stlst="--,--"
|   ok=.t.
+---ENDIF

* if nothing has been found, try matching
* first letters of entry with state names
+---DO WHILE .NOT. ok
|
|   +---IF 'ALABAMA'=st
|   |   stlst=stlst+', Alabama'
|   |   stn='AL'
|   +---ENDIF
|   +---IF 'ALASKA'=st
|   |   stlst=stlst+', Alaska'
|   |   stn='AK'
|   +---ENDIF
|   +---IF 'ARKANSAS'=st
|   |   stlst=stlst+', Arkansas'
```

```
| | stn='AR'  
| +---ENDIF  
| +---IF 'ARIZONA'=st  
| | stlist=stlist+', Arizona'  
| | stn='AZ'  
| +---ENDIF  
| +---IF 'CALIFORNIA'=st  
| | stlist=stlist+', California'  
| | stn='CA'  
| +---ENDIF  
| +---IF 'COLORADO'=st  
| | stlist=stlist+', Colorado'  
| | stn='CO'  
| +---ENDIF  
| +---IF 'CONNECTICUT'=st  
| | stlist=stlist+', Connecticut'  
| | stn='CT'  
| +---ENDIF  
| +---IF 'DELAWARE'=st  
| | stlist=stlist+', Delaware'  
| | stn='DE'  
| +---ENDIF  
| +---IF 'DISTRICT OF COLUMBIA'=st  
| | stlist=stlist+', District of Columbia'  
| | stn='DC'  
| +---ENDIF  
| +---IF 'FLORIDA'=st  
| | stlist=stlist+', Florida'  
| | stn='FL'  
| +---ENDIF  
| +---IF 'GEORGIA'=st  
| | stlist=stlist+', Georgia'  
| | stn='GA'  
| +---ENDIF  
| +---IF 'HAWAII'=st  
| | stlist=stlist+', Hawaii'  
| | stn='HI'  
| +---ENDIF  
| +---IF 'IDAHO'=st  
| | stlist=stlist+', Idaho'  
| | stn='ID'  
| +---ENDIF  
| +---IF 'ILLINOIS'=st  
| | stlist=stlist+', Illinois'  
| | stn='IL'  
| +---ENDIF  
| +---IF 'INDIANA'=st  
| | stlist=stlist+', Indiana'  
| | stn='IN'  
| +---ENDIF
```



```
| +---IF 'IOWA'=st
| | stlst=stlst+', Iowa'
| | stn='IA'
| +---ENDIF
| +---IF 'KANSAS'=st
| | stlst=stlst+', Kansas'
| | stn='KS'
| +---ENDIF
| +---IF 'KENTUCKY'=st
| | stlst=stlst+', Kentucky'
| | stn='KY'
| +---ENDIF
| +---IF 'LOUISIANA'=st
| | stlst=stlst+', Louisiana'
| | stn='LA'
| +---ENDIF
| +---IF 'MAINE'=st
| | stlst=stlst+', Maine'
| | stn='ME'
| +---ENDIF
| +---IF 'MARYLAND'=st
| | stlst=stlst+', Maryland'
| | stn='MD'
| +---ENDIF
| +---IF 'MASSACHUSETTS'=st
| | stlst=stlst+', Massachusetts'
| | stn='MA'
| +---ENDIF
| +---IF 'MICHIGAN'=st
| | stlst=stlst+', Michigan'
| | stn='MI'
| +---ENDIF
| +---IF 'MINNESOTA'=st
| | stlst=stlst+', Minnesota'
| | stn='MN'
| +---ENDIF
| +---IF 'MISSISSIPPI'=st
| | stlst=stlst+', Mississippi'
| | stn='MS'
| +---ENDIF
| +---IF 'MISSOURI'=st
| | stlst=stlst+', Missouri'
| | stn='MO'
| +---ENDIF
| +---IF 'MONTANA'=st
| | stlst=stlst+', Montana'
| | stn='MT'
| +---ENDIF
| +---IF 'NEBRASKA'=st
| | stlst=stlst+', Nebraska'
```

```
|      stn='NE'  
| +--ENDIF  
| +--IF 'NEVADA'=st  
| |      stlst=stlst+', Nevada'  
| |      stn='NV'  
| +--ENDIF  
| +--IF 'NEW HAMPSHIRE'=st  
| |      stlst=stlst+', New Hampshire'  
| |      stn='NH'  
| +--ENDIF  
| +--IF 'NEW JERSEY'=st  
| |      stlst=stlst+', New Jersey'  
| |      stn='NJ'  
| +--ENDIF  
| +--IF 'NEW MEXICO'=st  
| |      stlst=stlst+', New Mexico'  
| |      stn='NM'  
| +--ENDIF  
| +--IF 'NEW YORK'=st  
| |      stlst=stlst+', New York'  
| |      stn='NY'  
| +--ENDIF  
| +--IF 'NORTH CAROLINA'=st  
| |      stlst=stlst+', North Carolina'  
| |      stn='NC'  
| +--ENDIF  
| +--IF 'NORTH DAKOTA'=st  
| |      stlst=stlst+', North Dakota'  
| |      stn='ND'  
| +--ENDIF  
| +--IF 'OHIO'=st  
| |      stlst=stlst+', Ohio'  
| |      stn='OH'  
| +--ENDIF  
| +--IF 'OKLAHOMA'=st  
| |      stlst=stlst+', Oklahoma'  
| |      stn='OK'  
| +--ENDIF  
| +--IF 'OREGON'=st  
| |      stlst=stlst+', Oregon'  
| |      stn='OR'  
| +--ENDIF  
| +--IF 'PENNSYLVANIA'=st  
| |      stlst=stlst+', Pennsylvania'  
| |      stn='PA'  
| +--ENDIF  
| +--IF 'RHODE ISLAND'=st  
| |      stlst=stlst+', Rhode Island'  
| |      stn='RI'  
| +--ENDIF
```

01-11-89 15:00:00 CHKSTAT2.PRG  
Wed 01-11-89 15:15:18

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```
| +---IF 'SOUTH CAROLINA'=st  
| | stlst=stlst+', South Carolina'  
| | stn='SC'  
| +---ENDIF  
| +---IF 'SOUTH DAKOTA'=st  
| | stlst=stlst+', South Dakota'  
| | stn='SD'  
| +---ENDIF  
| +---IF 'TEXAS'=st  
| | stlst=stlst+', Texas'  
| | stn='TX'  
| +---ENDIF  
| +---IF 'TENNESSEE'=st  
| | stlst=stlst+', Tennessee'  
| | stn='TN'  
| +---ENDIF  
| +---IF 'UNITED STATES'=st  
| | stlst=stlst+', United States'  
| | stn='US'  
| +---ENDIF  
| +---IF 'UTAH'=st  
| | stlst=stlst+', Utah'  
| | stn='UT'  
| +---ENDIF  
| +---IF 'VERMONT'=st  
| | stlst=stlst+', Vermont'  
| | stn='VT'  
| +---ENDIF  
| +---IF 'VIRGINIA'=st  
| | stlst=stlst+', Virginia'  
| | stn='VA'  
| +---ENDIF  
| +---IF 'WASHINGTON'=st  
| | stlst=stlst+', Washington'  
| | stn='WA'  
| +---ENDIF  
| +---IF 'WEST VIRGINIA'=st  
| | stlst=stlst+', West Virginia'  
| | stn='WV'  
| +---ENDIF  
| +---IF 'WISCONSIN'=st  
| | stlst=stlst+', Wisconsin'  
| | stn='WI'  
| +---ENDIF  
| +---IF 'WYOMING'=st  
| | stlst=stlst+', Wyoming'  
| | stn='WY'  
| +---ENDIF
```

| \* if stlst is empty, take off last character of entry to see if it matches

01-11-89 15:00:00 CHKSTAT2.PRG  
Wed 01-11-89 15:15:18

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```
|  +--IF LEN(stlst)=0
|  |      st=SUBSTR(st,1,LEN(st)-1)
|  |      stln=LEN(st)
|  |
|  * if all entry characters removed, set special code, and exit do-while
|  |  +--IF stln=0
|  |  |      ok=.t.
|  |  |      stlst="--,--"
|  |  +--ENDIF
|  |
|  * if stlst has possible names, set ok to true (for ok to leave do-while)
|  +--ELSE
|  |      ok=.t.
|  +--ENDIF
|
|  * end of search for possible matches with state names
+--ENDDO

|  * strip off first two characters to eliminate leading ',
|  stlst=SUBSTR(stlst,3)
|  st=stn
|
|  RETURN
```

01-11-89 15:00:00 CHKSTATE.PRG  
Wed 01-11-89 15:15:01

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of 1  
1-39

```
*****
*- CHKSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry
*****
*
stn=""
DO chkstat2

* if ',' is found in list, more than one state name is present
* need to print additional help message
+--IF AT(", ", stlst)>0
|   st=""
|   ok=.f.
|   @ 23,1 CLEAR TO 24,78
|
|   * if special code found, then say that no match found
|   +--IF stlst=","--
|   |   @ 23,2 SAY "No match found for the name"
|   |   @ 24,2 SAY "Please check your spelling"
|   |
|   * if regular names are present, display them as possible matches
|   \+--ELSE
|   |   @ 23,2 SAY "Enter the name more completely. Possible matches are:"
|   |   @ 24,2 SAY SUBSTR(stlst,1,76)
|   |
|   +--ENDIF
|
|   * stlst contains only one state name, so it must be a match
+--ELSE
|   * set st to value found when matching entry
|   st=stn
+--ENDIF

* return to called routine
RETURN
```

```
*****
* COALBLD.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* build database on coal fields from txt file
*****
*
CLEAR
CLEAR ALL
SET TALK OFF
SET CONSOLE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0

* loop to process user requests
ans=" "
+--DO WHILE ans<> "Q"
|   CLEAR
|   @ 1,0 TO 3,79
|   @ 2,3 SAY "COALBLD database building routine"
|   @ 2,69 SAY DATE()
|   @ 8,15 SAY "Add to COALFIELD database"
|   @ 10,15 SAY "Split COALFIELD database into smaller files"
|   @ 12,15 SAY "Quit COALBUILD program"
|   @ 15,15 SAY "Option.(A/S/Q) " + CHR(174) + " " + CHR(175)
|   ans=" "
|   +--DO WHILE AT (ans, "ASQ")=0
|   |   ans=" "
|   |   @ 15,32 GET ans PICTURE "!"
|   |   READ
|   +--ENDDO
|
|=====
| * section for quitting
|
| +--IF ans="Q"
| |   LOOP
| +--ENDIF
|
|=====
| * section for adding to coalfiel.dbf from smaller files
|
| +--IF ans="A"
| |   @ 5,0 CLEAR
| |   @ 8,10 SAY "Adding to the COALFIELD database"
| |   +--IF FILE ("coalfiel.dbf")
```

```
| | | USE coalfiel
| | | +---IF RECCOUNT(>)>0
| | | | @ 12,10 SAY "The COALFIELD database has " ;
| | | | +LTRIM(STR(RECCOUNT(>))) + " entries in it."
| | | | ok=.f.
| | | | @ 14,10 SAY "Do you want to clear them before ";
| | | | +"adding? (Y/N)" GET ok PICTURE "Y"
| | | | READ
| | | | +---IF ok
| | | | | ok=.f.
| | | | | @ 16,10 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
| | | | | READ
| | | | +---ENDIF
| | |
| * if COALFIEL is to be cleared, zap it, then recreate index files
| | | +---IF ok
| | | | SET SAFETY OFF
| | | | ZAP
| | | | INDEX ON state TO coalfiel
| | | | INDEX ON code_no TO coalcode
| | | | SET SAFETY ON
| | | | CLOSE DATABASES
| | | | @ 18,10 SAY "COALFIED database cleared."
| | | +---ENDIF
| | |
| * let user know COALFIEL has no entries in it
| | | +---ELSE
| | | | @ 16,10 SAY "The COALFIELD database has no entries."
| | | +---ENDIF
| | |
| * let user know COALFIEL was not present and will be created, if it can
| | | +---ELSE
| | | | @ 12,10 SAY "COALFIEL database file not present. "
| | | | @ 14,10 SAY "It will be built from the first data file."
| | | +---ENDIF
| | |
| * wait before clearing screen display
| | | ky=" "
| | | @ 22,10 SAY "Press any key to continue..." GET ky
| | | READ
| | |
| * check with user to make sure he is ready to add
| | | @ 5,0 CLEAR
| | | ok=.f.
| | | @ 8,10 SAY "Ready to add to COALFIEL? (Y/N)" GET ok PICTURE "Y"
| | | READ
| | | +---IF .NOT. ok
| | | | LOOP
| | | +---ENDIF
| | |
```

```
| * loop through possible file names
| |   @ 10,10 SAY "Searching for COALFIEL data files"
| |   i=1
| |   fc=0
| |   fnd=.f.
| |   +--DO WHILE i<100
| | |   fl="COALFL" +LTRIM(STR(i)) +".DBF"
| | |   @ 12,10 SAY "Looking for " +fl +
| | |   +--IF FILE(fl)
| | | |   fc=fc+1
| | | |   @ 12,10 SAY "Found " +fl +". Adding to COALFIEL."
| | | |   fnd=.t.
| | |   +--IF FILE("coalfiel.dbf")
| | | |   USE coalfiel
| | | |   APPEND FROM &fl
| | |   +--ELSE
| | | |   USE &fl
| | | |   COPY TO coalfiel
| | |   +--ENDIF
| | |   CLOSE DATABASES
| | |   +--ENDIF
| | |   i=i+1
| |   +--ENDDO
|
| * announce to user total files found, then reindex COALFIEL
| |   +--IF fc>0
| | |   @ 14,10 SAY LTRIM(STR(fc)) +" files found."
| | |
| | |   @ 16,10 SAY "Updating index files for COALFIEL."
| | |   @ 17,14 SAY "Indexing coal fields by state"
| | |   USE coalfiel
| | |   SET SAFETY OFF
| | |   INDEX ON state TO coalfiel
| | |   SET SAFETY ON
| | |   @ ROW(),COL() SAY " - done"
| | |
| | |   @ 18,14 SAY "Indexing coal fields by code number"
| | |   SET SAFETY OFF
| | |   INDEX ON code_no TO coalcode
| | |   SET SAFETY ON
| | |   CLOSE DATABASES
| | |   @ ROW(),COL() SAY " - done"
| |
| * let user know that no files were found
| |   +--ELSE
| | |   @ 14,10 SAY "No files found."
| |   +--ENDIF
```



```

01-11-89 15:00:00 COALBLD.PRC
Wed 01-11-89 15:16:01

```

```

* wait before clearing screen display
|         ky=" "
|         @ 22,10 SAY "Press any key to continue..." GET ky
|         READ
|         LOOP
+---ENDIF

*-----
* section for splitting up coalfiel.dbf into smaller files

+---IF ans="S"
|         @ 5,0 CLEAR
|
* let user know that COALFIEL was not found, and cannot be split
|         +---IF .NOT. FILE("coalfiel.dbf")
|         |         @ 5,0 CLEAR
|         |         @ 10,10 SAY "COALFIEL.DBF database file was not found."
|         |         @ 12,10 SAY "The file must be present to split it " ;
|         |         +"into smaller data files."
|         |
* wait before clearing screen display
|         |         ky=" "
|         |         @ 22,10 SAY "Press any key to continue..." GET ky
|         |         READ
|         |         LOOP
|         +---ENDIF
|
* proceed with splitting up, if everything is ready
|         @ 5,0 CLEAR
|         ok=.f.
|         @ 8,10 SAY "Ready to split COALFIEL? (Y/N)" GET ok PICTURE "Y"
|         READ
|         +---IF .NOT. ok
|         |         LOOP
|         +---ENDIF
|
* loop to split up COALFIEL.dbf into smaller files (700 records each)
|         @ 8,10 SAY "Splitting COALFIELD database into smaller files."
|         i=1
|         USE coalfiel
|         +---DO WHILE i<100 .AND. .NOT. EOF()
|         |         fl="COALFL" +LTRIM(STR(i)) +".DBF"
|         |         @ 12,10 SAY "Creating " +fl +". "
|         |         SET SAFETY OFF
|         |         COPY NEXT 700 TO &fl
|         |         SET SAFETY ON
|         |         +---IF .NOT. EOF()
|         |         |         SKIP
|         |         +---ENDIF

```

01-11-89 15:00:00 COALBLD.PRG  
Wed 01-11-89 15:16:01

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```
| | | i=i+1
| | +--ENDDO
| | CLOSE DATABASES
| | @ 14,10 SAY LTRIM(STR(i-1)) +" files created."
| |
| * erase any remaining old data files
| | +--DO WHILE i<100
| | | f1="COALFL" +LTRIM(STR(i)) +".DBF"
| | | +--IF FILE(f1)
| | | | ERASE &f1
| | | +--ENDIF
| | | i=i+1
| | +--ENDDO
| |
| * wait before clearing screen display
| | ky=" "
| | @ 22,10 SAY "Press any key to continue..." GET ky
| | READ
| | +--ENDIF
|
+--ENDDO

.CLEAR ALL
SET TALK ON
RETURN
```

```
*****
* COALFIEL.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* update database on coal fields
*****
*
* reset colors to desired values if necessary
SET TALK OFF
DO setcolor
CLEAR ALL
SET BELL OFF
SET CONSOLE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0
ON ESCAPE

@ 6,0 SAY ''
TEXT
'      @@@@@@  @@@@@@  @@@@  @      @@@@@@@@  @@@@@@  @@@@@@@@  @      @@@@@@@@
'  @    @  @    @  @    @  @    @    @    @    @    @    @    @    @    @    @
'  @    @  @    @  @    @  @    @    @    @    @    @    @    @    @    @    @
'  @    @  @    @  @    @  @    @    @    @    @    @    @    @    @    @    @
'  @    @  @    @  @    @  @    @    @    @    @    @    @    @    @    @    @
'  @    @  @    @  @    @  @    @    @    @    @    @    @    @    @    @    @
'      @@@@@@  @@@@@@  @    @  @@@@@@@@  @    @    @@@@@@  @@@@@@@@  @@@@@@@@
ENDTEXT
@ 4,0 TO 16,79 double

* define operating environment
DO dbenvrn

* check for index file for coal fields
indxnd= ( FILE("coalfiel"+ending) ) .AND. ( FILE("coalcode"+ending) )
indxnd= indxnd .AND. ( FILE("coaldist"+ending) )
+--IF .NOT. indxnd
|   @ 17,15 SAY "Index files were not found on startup"
|   @ 18,15 SAY "Please wait while they are created"
|
|   +--IF .NOT. clipper
|   |   ON ESCAPE abt=.t.
|   +--ENDIF
|
|   @ ROW()+1,15 SAY "Indexing coal fields by state"
|   USE coalfiel
|   SET SAFETY OFF
|   INDEX ON state TO coalfiel
|   SET SAFETY ON
```

01-11-89 15:00:00 COALFIEL.PRG  
Wed 01-11-89 15:16:38

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of 2  
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```
|      @ ROW(),COL() SAY " - done"
|
|      @ ROW()+1,15 SAY "Indexing coal fields by code number"
|      SET SAFETY OFF
|      INDEX ON code_no TO coalcode
|      SET SAFETY ON
|      @ ROW(),COL() SAY " - done"
|
|      @ ROW()+1,15 SAY "Indexing coal fields by distance value"
|      SET SAFETY OFF
|      INDEX ON dist_from TO coaldist
|      SET SAFETY ON
|      CLOSE DATABASES
|      @ ROW(),COL() SAY " - done"
|
|      +--IF NOT clipper
|      |      ON ESCAPE
|      +--ENDIF
|
+--ENDIF

      * clear key entries
      c=1
+--DO WHILE c<>0
|      c=INKEY()
+--ENDDO

      * print message to continue
      @ 24,20 SAY "Press any key to continue..."

      * wait for key press
      c=0
+--DO WHILE c=0
|      c=INKEY()
+--ENDDO

      * run main coalfield routine
      DO coalfld0

      CLEAR ALL
      CLEAR
      SET TALK ON
      RETURN
```

```

*****
* COALFLD0.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* update database on coal fields
*****
*

USE coalfiel INDEX coalfiel, coalcode
SET DELETED ON
GO top
lv=.t.
ans=" "
currec=0
lstrec=0
* loop through options until done.
+--DO WHILE ans<>"Q"
|
| * display coal field screen
|   DO coalscr
|
| * ask for option
|   @ 22,10 SAY "Edit field / Add field / move Forward / move Backward"
|   @ 23,10 SAY "Delete field / change Views / Print field list / Quit"
|   @ 24,10 SAY "Option (E/A/F/B/D/V/P/Q)      " +CHR(174) + " " +CHR(175)
|   ans=" "
|   +--DO WHILE AT(ans,"EAFBDVPQ")=0
|   |   ans=" "
|   |   @ 24,40 GET ans PICTURE "!"
|   |   READ
|   +--ENDDO
|
| * to move forward
|   +--IF ans="F"
|   |   +--IF lv
|   |   |   +--IF .NOT. EOF()
|   |   |   |   SKIP
|   |   |   +--IF EOF()
|   |   |   |   GO BOTTOM
|   |   |   +--ENDIF
|   |   +--ENDIF
|   +--ELSE
|   |   +--IF .NOT. EOF()
|   |   |   SKIP 13
|   |   |   +--IF EOF()
|   |   |   |   GO top
|   |   |   +--ENDIF
|   |   +--ENDIF

```

```

| | +---ENDIF
| +---ENDIF
|
| * to move backward
| +---IF ans="B"
| | +---IF lv
| | | +---IF .NOT. EOF()
| | | | SKIP -1
| | | | +---IF BOF()
| | | | | GO top
| | | | +---ENDIF
| | | +---ENDIF
| | +---ELSE
| | | +---IF .NOT. EOF()
| | | | SKIP -13
| | | | +---IF BOF()
| | | | | GO BOTTOM
| | | | +---ENDIF
| | | +---ENDIF
| | +---ENDIF
| +---ENDIF
|
| +---IF ans="D"
| | +---IF .NOT. lv
| | | i=7
| | | @ i,0 SAY " "
| | | ans="+"
| | | @ 22,0 CLEAR
| | | @ 22,5 SAY CHR(24) +CHR(25) +" to move indicator / Delete ";
| | | +"indicated base / Quit without deleting"
| | | @ 23,5 SAY "Option (" +CHR(24) +"/" +CHR(25) +"/D/Q) ";
| | | +CHR(174) +" " +CHR(175)
| | | cq=1
| | | ans=" "
| | | +---DO WHILE ans<>"D" .AND. ans<>"Q"
| | | | @ i,0 SAY CHR(175)+CHR(175)+CHR(175)
| | | | +---IF cq>0
| | | | | sq=" "
| | | | | @ 23,27 GET sq
| | | | | CLEAR GETS
| | | | | @ 23,27 SAY ""
| | | | | cq=0
| | | | +---ENDIF
| | | | +---DO WHILE AT( CHR(cq), "DdQq"+CHR(5)+CHR(24) )=0
| | | | | cq=INKEY()
| | | | +---ENDDO
| | | | +---DO CASE
| | | | | CASE cq=5
| | | | | | sq=CHR(24)
| | | | | CASE cq=24

```

```
| | | | |      sq=CHR(25)
| | | | |      CASE cq=68 .OR. cq=100
| | | | |      sq="D"
| | | | |      ans="D"
| | | | |      CASE cq=81 .OR. cq=113
| | | | |      sq="Q"
| | | | |      ans="Q"
| | | | |      +---ENDCASE
| | | | |      @ 23,27 GET sq
| | | | |      CLEAR GETS
| | | | |      +---IF cq=68 .OR. cq=100 .OR. cq=81 .OR. cq=113
| | | | |      |      LOOP
| | | | |      +---ENDIF
| | | | |      +---IF cq=24
| | | | |      |      +---IF RECNO(<>)lstrec
| | | | |      |      |      @ i,0 SAY " "
| | | | |      |      |      i=i+1
| | | | |      |      |      SKIP
| | | | |      |      +---ENDIF
| | | | |      +---ENDIF
| | | | |      +---IF cq=5
| | | | |      |      +---IF RECNO(<>)currec
| | | | |      |      |      @ i,0 SAY " "
| | | | |      |      |      i=i-1
| | | | |      |      |      SKIP -1
| | | | |      |      +---ENDIF
| | | | |      +---ENDIF
| | | | |      +---ENDDO
| | | | |      currec=RECNO()
| | | | |      +---ENDIF
| | | | |      @ 22,0 CLEAR
|
| * if user wanted to quit from deleting, loop to end
| | | | |      +---IF ans="Q"
| | | | |      |      ans=" "
| | | | |      |      LOOP
| | | | |      +---ENDIF
|
| * check with user whether to delete
| | | | |      +---IF .NOT. EOF()
| | | | |      |      ok=.f.
| | | | |      |      @ 22,15 SAY "Delete this coalfield? (Y/N)" GET ok PICTURE "Y"
| | | | |      |      READ
| | | | |      |      +---IF ok
| | | | |      |      |      @ 23,15 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
| | | | |      |      |      READ
| | | | |      |      +---ENDIF
| | | | |      |      +---IF ok
| | | | |      |      |      DELETE
| | | | |      |      |      SKIP
```

```
| | | | +---IF EOF()  
| | | | | GO top  
| | | | +---ENDIF  
| | | +---ENDIF  
| | +---ELSE  
| | | @ 22,15 SAY "A coalfield must be present to be deleted."  
| | | ans=" "  
| | | @ 23,15 SAY "Press any key to continue..." GET ans  
| | | READ  
| | | ans="+"  
| | +---ENDIF  
| +---ENDIF  
  
| +---IF ans="V"  
| | lv = IIF( lv, .f., .t.)  
| +---ENDIF  
  
| +---IF ans="P"  
| | DO coalprt  
| | ans="+"  
| +---ENDIF  
  
| * if adding record is wanted  
| +---IF ans="A"  
| | APPEND BLANK  
| * set up to edit blank record  
| | ans="E"  
| | lv=.t.  
| +---ENDIF  
  
| +---IF ans="E"  
| | +---IF .NOT. lv  
| | | i=7  
| | | @ i,0 SAY " "  
| | | ans="+"  
| | | @ 20,0 CLEAR  
| | | @ 22,5 SAY CHR(24) +CHR(25) +" to move indicator / Edit ";  
| | | +"indicated base / Quit without editing"  
| | | @ 23,5 SAY "Option (" +CHR(24) +"/" +CHR(25) +"/E/Q) ";  
| | | +CHR(174) +" " +CHR(175)  
| | | cq=1  
| | | ans=" "  
| | | +---DO WHILE ans<>"E" .AND. ans<>"Q"  
| | | | @ i,0 SAY CHR(175)+CHR(175)+CHR(175)  
| | | | +---IF cq>0  
| | | | | sq=" "  
| | | | | @ 23,27 GET sq  
| | | | | CLEAR GETS  
| | | | | @ 23,27 SAY ""  
| | | | | cq=0
```



```

| | | | +---ENDIF
| | | | +---DO WHILE AT( CHR(cq),"EeQq"+CHR(5)+CHR(24) )=0
| | | | |   cq=INKEY()
| | | | +---ENDDO
| | | | +---DO CASE
| | | | |   CASE cq=5
| | | | |   |   sq=CHR(24)
| | | | |   CASE cq=24
| | | | |   |   sq=CHR(25)
| | | | |   CASE cq=69 .OR. cq=101
| | | | |   |   sq="E"
| | | | |   |   ans="E"
| | | | |   CASE cq=81 .OR. cq=113
| | | | |   |   sq="Q"
| | | | |   |   ans="Q"
| | | | +---ENDCASE
| | | |   @ 23,27 GET sq
| | | |   CLEAR GETS
| | | | +---IF cq=69 .OR. cq=101 .OR. cq=81 .OR. cq=113
| | | | |   LOOP
| | | | +---ENDIF
| | | | +---IF cq=24
| | | | |   +---IF RECNO(<>|strec
| | | | |   |   @ i,0 SAY " "
| | | | |   |   i=i+1
| | | | |   |   SKIP
| | | | |   +---ENDIF
| | | | +---ENDIF
| | | | +---IF cq=5
| | | | |   +---IF RECNO(<>currrec
| | | | |   |   @ i,0 SAY " "
| | | | |   |   i=i-1
| | | | |   |   SKIP -1
| | | | |   +---ENDIF
| | | | +---ENDIF
| | | | +---ENDDO
| | | |   currrec=RECNO()
| | | | +---ENDIF
|
| * if user wants to quit out of editing, loop to bottom
| |   +---IF ans="Q"
| | |   |   ans=" "
| | |   |   LOOP
| | |   +---ENDIF
|
| * otherwise, proceed with editing
| |   lv=.t.
| |   ans="C"
| |   ok=.f.
| |   redraw=.t.

```

```
| |      ttlmsg=.f.  
| |      q=5  
| |      lst=5  
| |      nxt=5  
| |      REPLACE last_chg WITH DATE()  
| |      +--DO WHILE ans="C"  
| |      |  
| |      * display coal field database screen if necessary  
| |      |      +--IF redraw  
| |      |      |      DO coalscr  
| |      |      |      redraw=.f.  
| |      |      +--ENDIF  
| |      |  
| |      * clear screen message area  
| |      |      @ 22,0 CLEAR  
| |      |  
| |      * process entry based on value of q (pointer)  
| |      |      +--DO CASE  
| |      |      |  
| |      *          CASE q=1  
| |      * @ 24,1 clear to 24,78  
| |      * @ 24,2 say 'prompt'  
| |      * ok=.f.  
| |      * do while .not. ok  
| |      * @ \,\ get \ picture ''  
| |      * read  
| |      * ok=.t.  
| |      * enddo  
| |      * lst=  
| |      * nxt=  
| |      |  
| |      * enter state  
| |      |      CASE q=5  
| |      |      |      @ 24,1 CLEAR TO 24,78  
| |      |      |      @ 23,2 SAY 'Enter two-letter state abbreviation or name'  
| |      |      |      ok=.f.  
| |      |      |      +--DO WHILE .NOT. ok  
| |      |      |      |      st=state+SPACE(18)  
| |      |      |      |      stlst=""  
| |      |      |      |      @ 3,10 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"  
| |      |      |      |      READ  
| |      |      |      |      rdky=READKEY()  
| |      |      |      |      +--IF rdky=12 .OR. rdky=268  
| |      |      |      |      |      ok=.t.  
| |      |      |      |      |      st=""  
| |      |      |      |      +--ELSE  
| |      |      |      |      |      DO chkstate  
| |      |      |      |      +--ENDIF  
| |      |      |      +--ENDDO  
| |      |      |      +--IF rdky=12 .OR. rdky=268
```

```

| | | | | st=state
| | | | | DO idstate
| | | | | +---ELSE
| | | | | | REPLACE state WITH st
| | | | | +---ENDIF
| | | | | st=st + " - " + st1st
| | | | | @ 3,10 GET st
| | | | | CLEAR GETS
| | | | | lst=5
| | | | | nxt=10
|
| * enter location
| | | | | CASE q=10
| | | | | @ 23,2 SAY 'Enter location of coal'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 3,47 GET location
| | | | | | READ
| | | | | | ok=.t.
| | | | | +---ENDDO
| | | | | lst=5
| | | | | nxt=15
|
| * enter county
| | | | | CASE q=15
| | | | | @ 23,2 SAY 'Enter county in which field is located'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 4,11 GET county
| | | | | | READ
| | | | | | ok=.t.
| | | | | +---ENDDO
| | | | | lst=10
| | | | | nxt=20
|
| * get latitude of coal field
| | | | | CASE q=20
| | | | | @ 23,2 SAY 'Enter north latitude of field (dddmss)'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | clat=STR(latitude,7)
| | | | | | lat_1 =VAL( SUBSTR(clat,1,3) )
| | | | | | lat_2 =VAL( SUBSTR(clat,4,2) )
| | | | | | lat_3 =VAL( SUBSTR(clat,6,2) )
| | | | | | @ 4,47 GET lat_1 PICTURE "###"
| | | | | | @ 4,51 GET lat_2 PICTURE "##"
| | | | | | @ 4,54 GET lat_3 PICTURE "##"
| | | | | | READ
| | | | | | ok= lat_1>24 .AND. lat_1<73
| | | | | | ok= ok .AND. lat_2>-1 .AND. lat_2<60

```

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of 16  
351-400

A-26

```
| | | | CASE q=30
| | | | @ 23,2 SAY 'Enter Proximate Analysis, wt %, moisture of coal'
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 7,15 GET MOISTURE
| | | | | READ
| | | | | ok=( moisture>=0 .AND. moisture<=60 ) .OR. ;
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | | +---IF .NOT. ok
| | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | @ 24,2 SAY "Value should be between 0% and 60%"
| | | | | +---ENDIF
| | | | +---ENDDO
| | | | lst=25
| | | | nxt=35
| | | |
| | | | * get fixed carbon component of coal sample
| | | | CASE q=35
| | | | @ 23,2 SAY 'Enter Proximate Analysis (wt %) ' ;
| | | | + 'of Fixed Carbon on a dry basis'
| | | | +---IF ttlmsg
| | | | | @ 24,2 SAY "Volatile, Fixed Carbon, and Ash ";
| | | | | + "values should total 100 %. Please check."
| | | | +---ENDIF
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 9,19 GET FIXED_CRBN
| | | | | READ
| | | | | ok=( fixed_crbn>=20 .AND. fixed_crbn<=99 ) .OR. ;
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | | +---IF .NOT. ok
| | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | @ 24,2 SAY "Value should be between 20% and 99%"
| | | | | +---ENDIF
| | | | +---ENDDO
| | | | lst=30
| | | | nxt=40
| | | |
| | | | * get volatile component of coal sample
| | | | CASE q=40
| | | | @ 23,2 SAY "Enter Proximate Analysis (wt %) ";
| | | | + " of Volatiles on a dry basis"
| | | | +---IF ttlmsg
| | | | | @ 24,2 SAY "Volatiles, Fixed Carbon, and Ash ";
| | | | | + "values should total 100 %. Please check."
| | | | +---ENDIF
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 9,41 GET VOLATILE
| | | | | READ
```

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451-500

A-28

```
| | | | CASE q=55
| | | |   @ 23,2 SAY 'Enter hydrogen (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 12,36 GET hydrogen
| | | | |   READ
| | | | |   ok=( hydrogen>=0 .AND. hydrogen<=30 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 23,1 CLEAR TO 24,78
| | | | |   @ 23,2 SAY "Value should be between 0% and 30%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=50
| | | |   nxt=60
| | | |
| | | | * get nitrogen (ultimate analysis)
| | | |   CASE q=60
| | | |   @ 23,2 SAY 'Enter nitrogen (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 12, 57 GET nitrogen
| | | | |   READ
| | | | |   ok=( nitrogen>=0 .AND. nitrogen<=30 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 24,1 CLEAR TO 24,78
| | | | |   @ 24,2 SAY "Value should be between 0% and 30%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=55
| | | |   nxt=62
| | | |
| | | | * get sulfur (ultimate analysis)
| | | |   CASE q=62
| | | |   @ 23,2 SAY 'Enter sulfur (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 13,13 GET sulfur
| | | | |   READ
| | | | |   ok=( sulfur>=0 .AND. sulfur<=20 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 24,1 CLEAR TO 24,78
| | | | |   @ 24,2 SAY "Value should be between 0% and 20%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=60
| | | |   nxt=64
```

```
| * get oxygen (ultimate analysis)
| | | | CASE q=64
| | | | @ 23,2 SAY 'Enter oxygen (%) on a dry basis'
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 13,36 GET oxygen ,
| | | | | READ
| | | | | ok=( oxygen>=0 .AND. oxygen<=50 ) .OR. ;
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | +---IF .NOT. ok
| | | | | @ 24,1 CLEAR TO 24,78
| | | | | @ 24,2 SAY "Value should be between 0% and 50%"
| | | | +---ENDIF
| | | | +---ENDDO
| | | | | 1st=62
| | | | | nxt=66
|
| * get gross calorific value
| | | | CASE q=66
| | | | @ 23,2 SAY 'Enter Gross Calorific Value (dry)'
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 16,34 GET hhv_dry
| | | | | READ
| | | | | ok=( hhv_dry>=5000 .AND. hhv_dry<=20000 ) .OR. ;
| | | | | READKEY()=12 .OR. READKEY()=268 .OR. hhv_dry=0
| | | | +---IF .NOT. ok
| | | | | @ 24,1 CLEAR TO 24,78
| | | | | @ 24,2 SAY "Value should be between 5000 ";
| | | | | | "and 20000 Btu/lb"
| | | | +---ENDIF
| | | | +---ENDDO
| | | | | 1st=64
| | | | | nxt=70
|
| * get rank of coal sample
| | | | CASE q=70
| | | | @ 22,2 SAY "Enter Rank of coal field -- Bituminous ";
| | | | | +"/ Sub-Bituminous / Lignite / "
| | | | @ 23,6 SAY "Anthracite / Semi-Anthracite -- (B/SB/L/A/SA)"
| | | | ok=.f.
| | | | +---DO WHILE .NOT. ok
| | | | | @ 16,62 GET rank PICTURE "!!!!!"
| | | | | READ
| | | | | crank=LTRIM(TRIM(rank))
| | | | | REPLACE rank WITH crank
| | | | | crank= "|" +crank + "|"
| | | | | ok= crank $ " |B| |SB| |L| |A| |SA| " .OR. ;
| | | | | READKEY()=12
| | | | +---IF .NOT. ok
```



```
| | | | | | @ 24,2 SAY "Allowable values are: B SB L A SA"
| | | | | | +---ENDIF
| | | | | | +---ENDDO
| | | | | |     lst=66
| | | | | |     nxt=75
| | | | | |
| * get ash fusion temperature (softening value, h=1/2w)
| | | | | | CASE q=75
| | | | | |     @ 23,2 SAY "Enter ash fusion temperature, softening value"
| | | | | |     ok=.f.
| | | | | | +---DO WHILE .NOT. ok
| | | | | | |     @ 17,32 GET aft_s
| | | | | | |     READ
| | | | | | |     ok= ( aft_s>1000 .AND. aft_s<3500 ) .OR. ;
| | | | | | |     READKEY()=12 .OR. READKEY()=268 .OR. aft_s=0
| | | | | | +---IF .NOT. ok
| | | | | | |     @ 24,1 CLEAR TO 24,78
| | | | | | |     @ 24,2 SAY "Value should be between 1000" ;
| | | | | | |     +CHR(248) +"F and 3500" +CHR(248) +"F"
| | | | | | +---ENDIF
| | | | | | +---ENDDO
| | | | | |     lst=70
| | | | | |     nxt=80
| | | | | |
| * get hardgrove grindability index of coal sample
| | | | | | CASE q=80
| | | | | |     @ 23,2 SAY 'Enter the Hardgrove Grindability Index for the
| | | | | |     coal'
| | | | | |     ok=.f.
| | | | | | +---DO WHILE .NOT. ok
| | | | | | |     @ 18, 35 GET HRDGRV_GRD
| | | | | | |     READ
| | | | | | |     ok=( hrdgrv_grd>=20 .AND. hrdgrv_grd<=120 ) .OR. ;
| | | | | | |     READKEY()=12 .OR. READKEY()=268 .OR. hrdgrv_grd=0
| | | | | | +---IF .NOT. ok
| | | | | | |     @ 24,1 CLEAR TO 24,78
| | | | | | |     @ 24,2 SAY "Value should be between 20 and 120"
| | | | | | +---ENDIF
| | | | | | +---ENDDO
| | | | | |     lst=75
| | | | | |     nxt=85
| | | | | |
| * get free swelling index for the coal sample
| | | | | | CASE q=85
| | | | | |     @ 23,2 SAY 'Enter the Free Swelling Index for the coal'
| | | | | |     ok=.f.
| | | | | | +---DO WHILE .NOT. ok
| | | | | | |     @ 18,65 GET FREE_SWELL
| | | | | | |     READ
| | | | | | |     ok=( free_swell>=0 .AND. free_swell<10 ) .OR. ;
```

```
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | | +--IF .NOT. ok
| | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | @ 24,2 SAY "Value should be between 0 and 9"
| | | | | +--ENDIF
| | | | | +--ENDDO
| | | | | | 1st=80
| | | | | | nxt=90
| | | | |
| | | | | * get the code number for the coal
| | | | | CASE q=90
| | | | | | @ 23,2 SAY 'Enter the Code Number for the coal'
| | | | | | ok=.f.
| | | | | | mcode_no=code_no
| | | | | +--DO WHILE .NOT. ok
| | | | | | mcode_no=SUBSTR(mcode_no+REPLICATE(" ",20),1,20)
| | | | | | @ 19,18 GET mcode_no
| | | | | | READ
| | | | | | mcode_no=UPPER(LTRIM(mcode_no))
| | | | |
| | | | | * check to see that the code number is unique
| | | | | +--IF LEN(TRIM(mcode_no))>0
| | | | | | rc=RECNO()
| | | | | | SET ORDER TO 2
| | | | | | SEEK mcode_no
| | | | | | +--IF rc=RECNO() .OR. EOF()
| | | | | | | ok=.t.
| | | | | | +--ELSE
| | | | | | | @ 24,0
| | | | | | | @ 24,2 SAY "Code number must be unique. ";
| | | | | | | +"Your entry is a duplicate."
| | | | | | +--ENDIF
| | | | | | SET ORDER TO 1
| | | | | | GOTO rc
| | | | | +--ELSE
| | | | | | @ 24,0
| | | | | | @ 24,2 SAY "Code number must not be blank."
| | | | | +--ENDIF
| | | | | +--ENDDO
| | | | | | 1st=85
| | | | | | nxt=95
| | | | |
| | | | | * get any notes/comments
| | | | | CASE q=95
| | | | | | @ 24,2 SAY "Enter any pertinent comments"
| | | | | | ok=.f.
| | | | | +--DO WHILE .NOT. ok
| | | | | | @ 20,11 GET cmmnt
| | | | | | READ
| | | | | | ok=.t.
```

```

| | | | +--ENDDO
| | | |   lst=90
| | | |   nxt=101
| | | |
| | | | +--ENDCASE
| | | |
| * find out what key was used to finish entry
| | |   rdky=READKEY()
| | |   rdky =IIF( rdky>255, rdky-256, rdky)
| | |
| * if key was <Up arrow> or <Pg Up>, go to last (previous entry)
| | |   +--IF rdky=4 .OR. rdky=6
| | |   |   q=lst
| * otherwise, go to next entry
| | |   +--ELSE
| | |   |   q=nxt
| | |   +--ENDIF
| | |
| * if <ESC> key was hit, set q to ask whether they are done
| | |   +--IF rdky=12
| | |   |   q=101
| | |   +--ENDIF
| | |
| * check to see if volatile+fixed carbon+ash = 100%
| | |   ttlprox =volatile +fixed_crbn +ash
| | |   +--IF ttlprox<>0
| | |   |   cttlprox =STR(ttlprox,7,2)
| | |   |   +--IF cttlprox<>" 100.00"
| | |   |   |   @ 9,68 SAY "not = 100%"
| | |   |   +--ELSE
| | |   |   |   @ 9,68 SAY "          "
| | |   |   +--ENDIF
| | |   +--ENDIF
| | |
| * check to see if ultimate analysis + ash = 100%
| | |   ttlult =oxygen +sulfur +nitrogen +hydrogen +carbon
| | |   +--IF ttlult<>0
| | |   |   cttlult =STR(ttlult+ash,7,2)
| | |   |   +--IF cttlult<>" 100.00"
| | |   |   |   @ 12,68 SAY "not = 100%"
| | |   |   +--ELSE
| | |   |   |   @ 12,68 SAY "          "
| | |   |   +--ENDIF
| | |   +--ENDIF
| | |
| * if done with entries, make sure proximate and ultimate equal 100%
| | |   @ 22,0 CLEAR
| | |   +--IF q>100
| | |   |   +--IF cttlprox<>" 100.00"
| | |   |   |   @ 22,5 SAY "Proximate analysis (volatiles, fixed ";

```

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Wed 01-11-89 15:16:53

```
|      |      |      |      + "carbon, ash) must total 100%"  
|      |      |      |      q=5  
|      |      |      |      +---ENDIF  
|      |      |      |      +---IF cttlult<>" 100.00"  
|      |      |      |      |      @ 23,5 SAY "Ultimate analysis + ash must total 100%"  
|      |      |      |      |      q=5  
|      |      |      |      |      +---ENDIF  
|      |      |      |      |      +---IF q=5  
|      |      |      |      |      |      @ 24,5 SAY "Press any key to continue..."  
|      |      |      |      |      |      +---DO WHILE INKEY()=0  
|      |      |      |      |      |      +---ENDDO  
|      |      |      |      |      +---ENDIF  
|      |      |      |      +---ENDIF  
  
|      |      |      |  
* if done with entries (q>100), ask to accept, change again, or quit  
|      |      |      |      +---IF q>100  
|      |      |      |      |      @ 22,0 CLEAR  
|      |      |      |      |      @ 22,5 SAY "Accept and store / Change values    " ;  
|      |      |      |      |      +CHR(174) +" " +CHR(175)  
|      |      |      |      |      ans=""  
|      |      |      |      |      +---DO WHILE AT(ans,"AC")=0  
|      |      |      |      |      |      ans=""  
|      |      |      |      |      |      @ 22,41 GET ans PICTURE "!"  
|      |      |      |      |      |      READ  
|      |      |      |      |      +---ENDDO  
  
* if operator wants to change again, set q to start at beginning  
|      |      |      |      +---IF ans="C"  
|      |      |      |      |      q=5  
|      |      |      |      |      +---ENDIF  
  
* end of checking whether done  
|      |      |      |      +---ENDIF  
  
* end of loop for entering coal field information  
|      |      |      |      +---ENDDO  
  
* end of if statement for editing  
+---ENDIF  
  
* end of do-while for reviewing/editing/adding entries  
+---ENDDO
```

```
*****
* COALPRT.PRG -- Last update 10/25/88
* Copyright (C) 1988 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* printout of coal field information
*****
*
* check to see if any records present
+--IF RECCOUNT()=0
|   @ 22,0 CLEAR
|   @ 22,10 SAY "At least one field must be in file to select print option."
|   ans=" "
|   @ 23,10 SAY "Press any key to continue..." GET ans
|   READ
|   ans=" "
|   RETURN
+--ENDIF

* if running stand-alone, values won't be defined
+--IF TYPE("topmgn")="U"
|   topmgn=0
+--ENDIF
+--IF TYPE("btmmgn")="U"
|   btmmgn=58
+--ENDIF
+--IF TYPE("lftmgn")="U"
|   lftmgn=0
+--ENDIF

* store current record being display so it isn't lost
rc=RECNO()

* set up variables
stlst=''
pg=0

* find out from user how many fields to print
@ 22,0 CLEAR
@ 22,4 SAY "Print field that is Displayed, fields for one State, ";
+"All fields, or"
@ 23,4 SAY "Quit (cancel print) -- Option ( D / S / A / Q )      ";
+CHR(174) +" " +CHR(175)
ans=" "
+--DO WHILE AT(ans,"DSAQ")=0
|   ans=" "
|   @ 23,58 GET ans PICTURE "!"
|   READ
```

+++ENDDO

\* if quit is selected, just return without changing a thing

```
+++IF ans="Q"
|   ans=" "
|   RETURN
+++ENDIF
```

\* ask questions to see what state to print

```
+++IF ans="S"
|   @ 22,0 CLEAR TO 24,79
|   @ 22,5 SAY "Enter state for coal information printout:"
|
|   * get verified state entry
|   st=SPACE(20)
|   ok=.f.
|   +--DO WHILE .NOT. ok
|   |   st=SPACE(20)
|   |   stlst=""
|   |   @ 22,48 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"
|   |   READ
|   |   rdky=READKEY()
|   |   +--IF rdky=12
|   |   |   RETURN
|   |   +--ENDIF
|   |   +--IF LEN(TRIM(st))>0
|   |   |   DO chkstate
|   |   +--ENDIF
|   +--ENDDO
|   mst=TRIM(st)
+++ENDIF
```

\* if single state wanted, go to first entry

```
+++IF ans="S"
|   SEEK mst
+++ENDIF
```

\* if all fields to be printed, go to top of file

```
+++IF ans="A"
|   GO top
+++ENDIF
```

\* set escape off to be able to trap it with inkey statement

```
SET ESCAPE OFF
abt=.f.
```

\* print message about printing information

```
@ 22,0 CLEAR
@ 23,10 SAY "Printing in progress. Press <ESC> to quit early..."
```

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```
* set up printer
SET MARGIN TO lftmgn
SET DEVICE TO PRINT
prevst=""

* loop for printing coal information
+--DO WHILE .NOT. EOF() .AND. .NOT. abt
|
| * first check for keys pressed
|   c=1
| * loop until no more keys present
|   +--DO WHILE c<>0
|   |   c=INKEY()
|   * if key pressed was escape, then set flag to abort early
|   |   +---IF c=27
|   |   |   abt=.t.
|   |   +---ENDIF
|   +---ENDDO
|
| * if abort flag set, jump to bottom of loop
|   +---IF abt
|   |   LOOP
|   +---ENDIF
|
| * advance to next page for a new state
|   +---IF prevst<>state
|   |   st=state
|   |   DO chkstate
|   |   hdg="Coal field information printout for: " +state + " - ";
|   |   +stlst
|   |   pg=pg+1
|   |   @ topmgn,0 SAY hdg
|   |   @ PROW(),60 SAY "Page " +LTRIM(STR(pg))
|   |   prevst=state
|   +---ENDIF
|
| * if at the bottom of the page, skip to the next one
|   +---IF pg=0 .OR. PROW()+14>btmmgn
|   |   pg=pg+1
|   |   @ topmgn,0 SAY hdg
|   |   @ PROW(),60 SAY "Page " +LTRIM(STR(pg))
|   +---ENDIF
|
| * print the entry
|   @ PROW()+2,0 SAY "Location: " +location
|   @ PROW(),56 SAY "Last changed: " +DTC(last_chg)
|   @ PROW()+1,0 SAY "County: "+county
|   @ PROW(),42 SAY "Lat:"
|   cl=STR(latitude,7)
|   @ PROW(),47 SAY SUBSTR(cl,1,3) + "d " +SUBSTR(cl,4,2) + "m " ;
```

```
|      +SUBSTR(cl,6,2) +"s"
|      @ PROW(),62 SAY "Long:"
|      cl=STR(longitude,7)
|      @ PROW(),68 SAY SUBSTR(cl,1,3) +"d " +SUBSTR(cl,4,2) +"m " ;
|      +SUBSTR( cl,6,2) +"s"
|      @ PROW()+1,2 SAY "Proximate Analysis"
|      @ PROW(),49 SAY "Moisture:"
|      @ PROW(),59 SAY moisture
|      @ PROW(),66 SAY "% (as delivered)"
|      @ PROW()+1,5 SAY "Fixed Carbon:"
|      @ PROW(),19 SAY fixed_crbn
|      @ PROW(),26 SAY "% Volatile:"
|      @ PROW(),41 SAY volatile
|      @ PROW(),48 SAY "% Ash:"
|      @ PROW(),58 SAY ash
|      @ PROW(),65 SAY "% --- (dry basis)"
|      @ PROW()+1,2 SAY "Ultimate Analysis -- (dry basis)"
|      @ PROW()+1,5 SAY "Carbon:"
|      @ PROW(),13 SAY carbon
|      @ PROW(),19 SAY "%"
|      @ PROW(),26 SAY "Hydrogen:"
|      @ PROW(),36 SAY hydrogen
|      @ PROW(),42 SAY "%"
|      @ PROW(),47 SAY "Nitrogen:"
|      @ PROW(),57 SAY nitrogen
|      @ PROW(),63 SAY "%"
|      @ PROW()+1,5 SAY "Sulfur:"
|      @ PROW(),13 SAY sulfur
|      @ PROW(),19 SAY "%"
|      @ PROW(),28 SAY "Oxygen:"
|      @ PROW(),36 SAY oxygen
|      @ PROW(),42 SAY "%"
|      @ PROW()+1,2 SAY "Miscellaneous"
|      @ PROW()+1,5 SAY "Gross Calorific Value (dry):"
|      @ PROW(),34 SAY HHV_dry
|      @ PROW(),41 SAY "Btu/lb"
|      @ PROW(),56 SAY "Rank:"
|      @ PROW(),62 SAY RANK
|      @ PROW()+1,5 SAY "Hemispherical Temperature:"
|      @ PROW(),39 SAY aft_s
|      @ PROW(),45 SAY "F (H=1/2W, reducing)"
|      @ PROW()+1,5 SAY "Hardgrove Grindability Index:"
|      @ PROW(),35 SAY HRDGRV_GRD
|      @ PROW(),44 SAY "Free Swelling Index:"
|      @ PROW(),65 SAY FREE_SWELL
|      @ PROW()+1,5 SAY "Code Number:"
|      @ PROW(),18 SAY CODE_NO
|      @ PROW()+1,5 SAY "Note:"
|      @ PROW(),11 SAY cmmnt
```



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```
| * skip to next entry
|   SKIP
|
| * if only one state wanted, check to see if a new state has shown up
|   +--IF ans="S"
| * if skip has moved to a new state, go to bottom, then one past for
| * hitting the EOF (end-of-file)
|   |   +--IF mst<>state
|   |   |   GO BOTTOM
|   |   |   SKIP
|   |   +--ENDIF
|   +--ENDIF
|
| * if only the displayed field is wanted, skip to bottom
|   +--IF ans="D"
|   |   GO BOTTOM
|   |   SKIP
|   +--ENDIF
|
+--ENDDO

* go back to original record being displayed
COTO rc

* move back to top of page, and reset values back to normal
EJECT
SET ESCAPE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0
RETURN
```

```
*****
* COALSCR.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* screen drawing for coal fields
*****
*
```

```
* display long view of coal field
+--IF lv
|
|  CLEAR
|  @ 1,0 TO 21,79 double
|  @ 5,1 TO 5,78 DOUBLE
|  @ 10,1 TO 10,78 DOUBLE
|  @ 14,1 TO 14,78 DOUBLE
|  @ 8,1 TO 8,7
|  @ 8,21 TO 8,78
|  @ 2,2 SAY "Coal field location"
|  @ 2,54 SAY "Last changed: "
|  @ 3,3 SAY "State:"
|  @ 3,37 SAY "Location:"
|  @ 4,3 SAY "County:"
|  @ 4,42 SAY [Lat:    ] +CHR(248) +[ '  " ]
|  @ 4,61 SAY [Long:   ] +CHR(248) +[ '  " ]
|  @ 6,2 SAY "Proximate Analysis"
|  @ 7,5 SAY "Moisture:      " % (as delivered)"
|  @ 8,8 SAY "( dry basis )"
|  @ 9,5 SAY "Fixed Carbon:"
|  @ 9,26 SAY "% Volatile:"
|  @ 9,48 SAY "% Ash:"
|  @ 9,65 SAY "%"
|  @ 11,2 SAY "Ultimate Analysis -- (dry basis)"
|  @ 12,5 SAY "Carbon:      %"
|  @ 12,26 SAY "Hydrogen:   %"
|  @ 12,47 SAY "Nitrogen:   %"
|  @ 13,5 SAY "Sulfur:      %"
|  @ 13,28 SAY "Oxygen:     %"
|  @ 15,2 SAY "Miscellaneous"
|  @ 16,5 SAY "Gross Calorific Value (dry):      Btu/lb"
|  @ 16,56 SAY "Rank:"
|  @ 17,5 SAY "Hemispherical Temperature:      " ;
|  +CHR(248) +"F (H=" +CHR(171) +"W, reducing)"
|  @ 18,5 SAY "Hardgrove Grindability Index:"
|  @ 18,44 SAY "Free Swelling Index:"
|  @ 19,5 SAY "Code Number:"
|  @ 20,5 SAY "Note:"
|
|  * display values only if present
```

```
|  +---IF .NOT. EOF()
|  |      @ 2,68 SAY last_chg
|  |      st=state
|  |      stlst=""
|  |      DO idstate
|  |      st=st+" - "+stlst
|  |      @ 3,10 GET st
|  |      @ 3,47 GET location
|  |      @ 4,11 GET county
|  |      clat=STR(latitude,7)
|  |      lat_1=SUBSTR(clat,1,3)
|  |      lat_2=SUBSTR(clat,4,2)
|  |      lat_3=SUBSTR(clat,6,2)
|  |      @ 4,47 GET lat_1
|  |      @ 4,51 GET lat_2
|  |      @ 4,54 GET lat_3
|  |      clong=STR(longitude,7)
|  |      clo_1=SUBSTR(clong,1,3)
|  |      clo_2=SUBSTR(clong,4,2)
|  |      clo_3=SUBSTR(clong,6,2)
|  |      @ 4,67 GET clo_1
|  |      @ 4,71 GET clo_2
|  |      @ 4,74 GET clo_3
|  |      @ 7,15 GET moisture
|  |      @ 9,19 GET fixed_crbn
|  |      @ 9,41 GET volatile
|  |      @ 9,58 GET ash
|  |      @ 12,13 GET carbon
|  |      @ 12,36 GET hydrogen
|  |      @ 12,57 GET nitrogen
|  |      @ 13,13 GET sulfur
|  |      @ 13,36 GET oxygen
|  |      @ 16,34 GET HHV_dry
|  |      @ 16,62 GET RANK
|  |      @ 17,32 GET aft_s
|  |      @ 18,35 GET HRDCRV_GRD
|  |      @ 18,65 GET FREE_SWELL
|  |      @ 19,18 GET CODE_NO
|  |      @ 20,11 GET cmmnt
|  |      CLEAR GETS
|  |      currec=RECNO()
|  +---ELSE
|  |      currec=0
|  +---ENDIF
|
|  * display short view of coal fields
+---ELSE
|      CLEAR
|      @ 1,0 TO 4,79 double
|      @ 2,3 SAY "Coal Field Information Management Program"
```

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Wed 01-11-89 15:19:27

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```
|      @ 3,3 SAY "Condensed View of Coal Fields"
|      @ 2,69 SAY DATE()
|      @ 6,2 SAY "State   Rank   County           Location"
|      +---IF .NOT. EOF()
|      |      currec=RECNO()
|      |      i=7
|      |      +---DO WHILE .NOT. EOF() .AND. i<20
|      |      |      @ i,3 GET state
|      |      |      @ i,10 GET rank
|      |      |      @ i,18 GET county
|      |      |      @ i,44 GET location
|      |      |      CLEAR GETS
|      |      |      i=i+1
|      |      |      lstrec=RECNO()
|      |      |      SKIP
|      |      +---ENDDO
|      |      GOTO currec
|      +---ELSE
|      |      currec=0
|      +---ENDIF
|      @ 21,0 TO 21,79 double
+---ENDIF

RETURN
```

01-11-89 15:00:00 DBENVRN.PRG  
Wed 01-11-89 15:19:49

Pg 1  
of 1  
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```
*****
* DBENVRN.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
*****
* define database environment for the system
*****
*
PUBLIC fox, clipper, ending

* define ending of index files based on operating environment
ending=""

* fox is .t. if run under FoxBASE+, otherwise .f.
+--IF fox
|   ending=".IDX"
+--ENDIF

* clipper is .t. if run under Clipper, otherwise .f.
+--IF clipper
|
| * function returns index file ending based on how program has been linked.
| * returns ".NDX" if ndx.obj was linked to produce dBASE III+
| *   compatible index files
| * returns ".NTX" if ndx.obj not linked, which results in standard
| *   Clipper index files
|   ending=indexext()
|
| * readexit function with .t. as parameter sets Clipper to use
| * up-arrow and down-arrow keys to exit from variable READs
|   c=readexit(.t.)
+--ENDIF

* if nothing was assigned by other two routines, it must be running
* under dBASE III+, meaning ".NDX" (standard index) files used
+--IF LEN(ending)=0
|   ending=".NDX"
+--ENDIF

RETURN
```

01-11-89 15:00:00 IDSTATE.PRG  
Wed 01-11-89 15:19:58

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of 3  
1-50

```
*****
*- IDSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
```

```
*- using st, get state name
*****
```

```
*
* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stlst=""
```

```
+--DO CASE
```

```
| CASE st='AL'
|   stlst='Alabama'
| CASE st='AK'
|   stlst='Alaska'
| CASE st='AR'
|   stlst='Arkansas'
| CASE st='AZ'
|   stlst='Arizona'
| CASE st='CA'
|   stlst='California'
| CASE st='CO'
|   stlst='Colorado'
| CASE st='CT'
|   stlst='Connecticut'
| CASE st='DC'
|   stlst='District of Columbia'
| CASE st='DE'
|   stlst='Delaware'
| CASE st='FL'
|   stlst='Florida'
| CASE st='GA'
|   stlst='Georgia'
| CASE st='HI'
|   stlst='Hawaii'
| CASE st='ID'
|   stlst='Idaho'
| CASE st='IL'
|   stlst='Illinois'
| CASE st='IN'
|   stlst='Indiana'
| CASE st='IA'
|   stlst='Iowa'
| CASE st='KS'
|   stlst='Kansas'
| CASE st='KY'
|   stlst='Kentucky'
```

```
| CASE st='LA'  
|   stlst='Louisiana'  
| CASE st='ME'  
|   stlst='Maine'  
| CASE st='MD'  
|   stlst='Maryland'  
| CASE st='MA'  
|   stlst='Massachusetts'  
| CASE st='MI'  
|   stlst='Michigan'  
| CASE st='MN'  
|   stlst='Minnesota'  
| CASE st='MS'  
|   stlst='Mississippi'  
| CASE st='MO'  
|   stlst='Missouri'  
| CASE st='MT'  
|   stlst='Montana'  
| CASE st='NE'  
|   stlst='Nebraska'  
| CASE st='NV'  
|   stlst='Nevada'  
| CASE st='NH'  
|   stlst='New Hampshire'  
| CASE st='NJ'  
|   stlst='New Jersey'  
| CASE st='NM'  
|   stlst='New Mexico'  
| CASE st='NY'  
|   stlst='New York'  
| CASE st='NC'  
|   stlst='North Carolina'  
| CASE st='ND'  
|   stlst='North Dakota'  
| CASE st='OH'  
|   stlst='Ohio'  
| CASE st='OK'  
|   stlst='Oklahoma'  
| CASE st='OR'  
|   stlst='Oregon'  
| CASE st='PA'  
|   stlst='Pennsylvania'  
| CASE st='RI'  
|   stlst='Rhode Island'  
| CASE st='SC'  
|   stlst='South Carolina'  
| CASE st='SD'  
|   stlst='South Dakota'  
| CASE st='TX'  
|   stlst='Texas'
```

01-11-89 15:00:00 IDSTATE.PRG  
Wed 01-11-89 15:19:58

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```
| CASE st='TN'  
|   stlst='Tennessee'  
| CASE st='US'  
|   stlst='United States'  
| CASE st='UT'  
|   stlst='Utah'  
| CASE st='VT'  
|   stlst='Vermont'  
| CASE st='VA'  
|   stlst='Virginia'  
| CASE st='WA'  
|   stlst='Washington'  
| CASE st='WV'  
|   stlst='West Virginia'  
| CASE st='WI'  
|   stlst='Wisconsin'  
| CASE st='WY'  
|   stlst='Wyoming'  
+--ENDCASE  
RETURN
```



01-11-89 15:00:00 SETCOLOR.PRG  
Wed 01-11-89 15:20:18

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Of 1  
1-23

```
*****
*- SETCOLOR.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*****
*- routine to set colors based on database entry
*****
*
* reset colors to desired values if necessary
+--IF FILE("colors.dbf")
|   USE colors
|   +--IF RECCOUNT(>)>0
|   |   c_lf=TRIM(lf g)
|   |   c_lb=TRIM(lb g)
|   |   c_hf=TRIM(hf g)
|   |   c_hb=TRIM(hb g)
|   |   c_bd=TRIM(br dr)
|   |   SET COLOR TO &c_lf./&c_lb., &c_hf./&c_hb., &c_bd
|   +--ENDIF
+--ENDIF
RELEASE ALL LIKE c_??
CLEAR
RETURN
```

## Appendix B: United States Geological Survey Coal Properties Data Listing

Coal Field Information Printout for AK - Alaska .....	B-5
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<u>Table Title</u>	<u>Description</u>
Location	Either the name of the mine or a description of the type of mine.
County	County in which the coal field is located.
Code Number	A unique number given to the entry for later identification. (In the case of the original data, the United States Geological Survey number assigned to the entry.)
Latitude	The north latitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Longitude	The west longitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Rank	The rank, or type, of the coal: <div style="margin-left: 100px;"> B       =       bituminous  SB       =       sub-bituminous  L        =       lignite  A        =       anthracite  SA       =       semi-anthracite </div>
Htg Val	Heating value of the dry coal in Btu/lb.
Last Chg	Date the entry was last changed.
Moisture	Moisture fraction of the coal as delivered, in percent, from the proximate analysis.
Volatiles	Fraction of volatiles in the coal on a dry basis, in percent, from the proximate analysis.
Fxd Crbn	Fraction of fixed carbon in the coal on a dry basis, in percent, from the proximate analysis.
Ash	Fraction of ash in the coal on a dry basis, in percent, from the proximate analysis.
Carbon	Fraction of carbon in the coal on a dry basis, in percent, from the ultimate analysis.
Hydrogen	Fraction of hydrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Sulfur	Fraction of sulfur in the coal on a dry basis, in percent, from the ultimate analysis.
Oxygen	Fraction of oxygen in the coal on a dry basis, in percent, from the ultimate analysis.
Nitrogen	Fraction of nitrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Hardgrove	Hardgrove grindability index of the coal.
Free Swell	Free swelling index of the coal.
Hemi Temp	Hemispherical temperature of the coal, in °F; defined as the softening temperature at which $H = 1/2 W$

Coal Field Information Printout for

AK - Alaska

Coal Field Information Printout for: AK - Alaska

Location		Volatiles	Fxd Crbn	County		Code Number			Latitude		Longitude		Rank	Htg Val	Last Chg
Moisture				Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp			
4.10	34.80	47.20	18.00	BRISTOL BAY BOROUGH	62.90	D177647	4.60	0.30	554603	1603845	B	10810	0.0	09/01/88	2804
2.30	32.90	37.60	29.50	BRISTOL BAY BOROUGH	53.60	D177644	4.10	1.10	561557	1584203	B	9340	1.0	09/01/88	2687
11.00	43.20	30.40	26.40	KENAI PENINSULA BOROUGH	51.00	D169228	4.50	0.40	594500	1510000	SB	8870	0.0	09/01/88	0
18.90	51.40	40.80	7.80	KENAI PENINSULA BOROUGH	62.00	D178773	5.20	0.40	600024	1513722	SB	10580	0.0	09/01/88	2354
23.40	54.10	39.60	6.30	KENAI PENINSULA BOROUGH	60.30	D178628	5.20	1.70	600153	1514015	SB	10220	0.0	09/01/88	1913
26.50	41.40	33.30	25.30	KENAI PENINSULA BOROUGH	50.00	D178629	4.30	0.30	600339	1513914	SB	8600	0.0	09/01/88	2138
21.60	50.10	39.80	10.10	KENAI PENINSULA BOROUGH	61.10	D178775	5.10	0.40	600403	1513846	SB	10600	0.0	09/01/88	2075
20.70	46.00	37.20	16.80	KENAI PENINSULA BOROUGH	56.30	D178774	4.80	0.40	600417	1513828	SB	9810	0.0	09/01/88	2228
20.20	43.00	27.20	29.80	KENAI PENINSULA BOROUGH	47.70	D178777	4.10	0.40	601211	1512603	SB	8260	0.0	09/01/88	2183
25.10	40.10	30.00	29.90	KENAI PENINSULA BOROUGH	47.20	D178778	4.20	0.40	601229	1512534	SB	8240	0.0	09/01/88	2120
21.10	46.50	44.60	8.90	KENAI PENINSULA BOROUGH	63.00	D178635	5.00	0.10	611100	1513530	SB	10720	0.0	09/01/88	2228
19.90	44.20	38.70	17.10	KENAI PENINSULA BOROUGH	57.50	D178631	4.70	0.10	611710	1514447	SB	9860	0.0	09/01/88	2417
30.80	56.20	37.90	5.90	MATANUSKA-SUSITNA	64.90	D179395	5.70	0.10	622348	1512420	SB	11490	0.0	09/01/88	2282
18.00	44.10	42.10	13.80	NO BOROUGH	60.90	D177642	4.60	1.10	633917	1454638	SB	10340	0.0	09/01/88	2300
USIBELLI COAL MINE	23.80	47.40	36.60	NO BOROUGH	57.20	D186043	4.50	0.30	635410	1485616	SB	9850	0.0	09/01/88	2408
USIBELLI COAL MINE	24.00	46.80	39.90	NO BOROUGH	62.60	D179396	5.00	0.40	635456	1483902	SB	11000	0.0	09/01/88	2354

Coal Field Information Printout for: AK - Alaska

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
USIBELLI COAL MINE	19.40	45.40	28.70	NO BOROUGH	25.90	52.50	4.30	D17939B	0.40	635500	1483846	SB	9140	09/01/88
										15.90	1.00		0.0	2282
USIBELLI COAL MINE	24.00	47.30	43.90	NO BOROUGH	8.80	64.50	4.90	D172389	0.30	635509	1484000	SB	11130	09/01/88
										20.40	1.10		0.0	0
USIBELLI COAL MINE	29.70	47.90	40.40	NO BOROUGH	11.70	61.10	4.80	D179397	0.30	635605	1483922	SB	10430	09/01/88
										21.20	0.90		0.0	2273
USIBELLI COAL MINE	23.40	49.30	41.40	NO BOROUGH	9.30	63.00	5.10	D179399	0.30	635622	1483942	SB	10760	09/01/88
										21.40	0.90		0.0	2183
	32.70	48.40	37.90	NO BOROUGH	13.70	58.00	4.40	D175053	0.10	635812	1484500	SB	9600	09/01/88
										23.10	0.70		0.0	2111
USIBELLI COAL MINE	28.50	50.30	39.40	NO BOROUGH	10.30	61.80	4.70	D186048	1.00	635836	1471622	SB	10600	09/01/88
										21.20	1.00		0.0	2417
	12.80	14.70	55.50	NORTH SLOPE BOROUGH	29.80	57.00	2.70	D178772	1.50	680947	1655822	B	9550	09/01/88
										8.10	0.90		0.0	2732
	16.10	11.20	82.10	NORTH SLOPE BOROUGH	6.70	84.10	3.40	D178771	0.60	882413	1655730	B	13870	09/01/88
										4.00	1.20		0.0	2597
	6.70	40.80	55.70	NORTH SLOPE BOROUGH	3.50	77.80	5.00	D184607	0.20	692024	1603040	B	13560	09/01/88
										11.90	1.60		0.5	2246
	6.10	37.40	55.10	NORTH SLOPE BOROUGH	7.50	75.40	5.00	D184610	0.20	692040	1602555	B	13270	09/01/88
										10.00	1.90		1.5	2354
	12.80	36.40	55.20	NORTH SLOPE BOROUGH	8.40	69.30	4.30	D184609	0.20	692044	1602808	B	11680	09/01/88
										15.70	2.10		0.0	2300
	18.90	34.60	59.90	NORTH SLOPE BOROUGH	5.50	72.50	4.10	D184603	0.50	692140	1611410	B	12070	09/01/88
										15.90	1.50		0.0	2192
	5.20	34.50	49.80	NORTH SLOPE BOROUGH	15.70	69.30	4.60	D184604	0.30	692142	1612725	B	12040	09/01/88
										9.00	1.10		0.5	2426
	6.50	37.40	56.40	NORTH SLOPE BOROUGH	6.20	76.80	5.10	D184612	0.30	692154	1602145	B	13500	09/01/88
										10.00	1.60		2.0	2192
	20.90	36.70	58.50	NORTH SLOPE BOROUGH	4.80	71.10	4.10	D184602	0.30	692200	1611450	B	11770	09/01/88
										18.20	1.50		0.0	2354
	8.70	35.60	60.60	NORTH SLOPE BOROUGH	3.80	78.10	4.70	D184598	0.30	692256	1612322	B	13450	09/01/88
										11.50	1.60		0.5	2300

Coal Field Information Printout for: AK - Alaska

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
22.50	35.80	59.50	NORTH SLOPE BOROUGH	3.70	71.90	4.10	692308	1611600	B	11890	09/01/88
							18.10	1.90		0.0	2183
25.50	42.30	51.50	NORTH SLOPE BOROUGH	6.20	68.50	4.00	692310	1612320	B	11180	09/01/88
							19.00	1.90		0.0	2282
9.70	37.20	59.60	NO BOROUGH	3.20	74.30	4.50	692535	1611340	B	12620	09/01/88
							15.10	1.70		0.0	0
14.10	36.00	61.20	NORTH SLOPE BOROUGH	2.80	73.50	4.30	692617	1612045	B	12270	09/01/88
							17.50	1.60		0.0	2129
13.90	35.10	51.30	NORTH SLOPE BOROUGH	3.60	73.90	4.40	692648	1604512	B	12370	09/01/88
							15.30	1.50		0.0	2245
5.00	26.30	34.50	NORTH SLOPE BOROUGH	39.20	48.50	3.60	692708	1612220	B	8580	09/01/88
							7.20	1.10		0.0	2912
11.90	34.10	63.30	NORTH SLOPE BOROUGH	2.60	76.90	4.50	692758	1612228	B	13080	09/01/88
							13.80	1.80		0.0	2192
8.40	37.40	57.80	NORTH SLOPE BOROUGH	4.80	77.50	4.90	692832	1612220	B	13480	09/01/88
							11.00	1.50		0.5	2408
5.70	42.50	40.90	NORTH SLOPE BOROUGH	16.60	53.80	4.40	693143	1612020	B	8900	09/01/88
							23.50	1.50		0.0	2561

**Coal Field Information Printout for**

**AL - Alabama**



Coal Field Information Printout for: AL - Alabama

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Oxygen	Longitude	Rank	Hardgrove	Free Swell	Htg Val	Last Chg
	43.60	37.80	24.10	CHOCTAW	38.10	41.90	3.60	W188893	4.10	315919	11.40	880716	L			6860	09/01/88
												0.90				0.0	2048
	50.10	37.40	27.90	CHOCTAW	34.70	45.20	3.30	W188891	3.20	320301	12.60	881243	L			7600	09/01/88
												1.00				0.0	2138
	50.70	37.50	37.50	WILCOX	25.00	52.50	3.60	W188881	2.80	320353	15.10	873629	L			8560	09/01/88
												1.00				0.0	2084
	49.60	41.80	28.40	CHOCTAW	29.80	47.80	3.50	W188890	6.00	320419	12.10	881336	L			8270	09/01/88
												0.80				0.0	2066
	52.50	41.30	47.50	MARENGO	11.20	53.10	4.10	W188882	4.60	320524	15.90	873734	L			10460	09/01/88
												1.10				0.0	2120
	52.40	40.50	41.20	MARENGO	18.30	57.10	3.90	W188883	4.00	320716	15.60	874125	L			9560	09/01/88
												1.10				0.0	2084
	48.00	35.70	30.60	CHOCTAW	33.70	41.10	3.20	W188880	5.60	320742	15.60	881856	L			6880	09/01/88
												0.80				0.0	2102
	36.50	42.30	31.70	CHOCTAW	26.00	47.60	3.50	W188879	5.20	320855	16.60	881608	L			7510	09/01/88
												1.10				0.0	2084
	49.50	40.20	37.20	MARENGO	22.60	52.30	3.80	W188884	5.10	320926	15.20	874513	L			8910	09/01/88
												1.00				0.0	2030
	49.60	44.80	43.10	MARENGO	12.10	59.90	4.30	W188886	4.20	320959	18.50	875218	L			10320	09/01/88
												1.00				0.0	1976
	46.10	42.10	34.90	SUMTER	23.00	54.10	4.00	W188887	3.90	322156	14.10	881704	L			9200	09/01/88
												0.90				0.0	2030
ALAND	1.30	36.90	59.70	TUSCALOOSA	3.40	82.00	5.40	W193940	1.50	331608	6.10	872343	B			14720	09/01/88
												1.60				7.0	2201
IN-SITU GAS DDH	0.60	26.40	68.30	JEFFERSON	5.30	82.20	5.10	W193937	2.90	332441	3.00	870636	B			14760	09/01/88
												1.50				9.0	2111
0.90	25.20	69.40	69.40	JEFFERSON	5.40	82.90	5.00	W191076	1.10	333259	4.20	870538	B			14580	09/01/88
												1.40				9.0	2512
1.70	30.50	45.10	45.10	TUSCALOOSA	24.30	61.40	4.30	W191070	1.90	333630	6.70	873630	B			11060	09/01/88
												1.40				4.0	2606
1.10	30.00	62.70	62.70	JEFFERSON	7.30	79.60	5.10	W191078	1.40	333802	5.00	865020	B			14260	09/01/88
												1.60				8.5	2557

Coal Field Information Printout for: AL - Alabama

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Code Number Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
1.20	34.60	56.60	WALKER	8.80	77.70	W191939	333815	871054	B	13910	09/01/88
						5.20	4.80	1.40		9.0	2399
1.40	31.00	50.80	WALKER	18.20	68.10	W191075	333823	871113	B	12210	09/01/88
						4.80	6.00	1.30		8.5	2804
0.90	30.30	57.00	JEFFERSON	12.70	74.20	W191077	333900	870810	B	13380	09/01/88
						4.90	3.80	1.30		9.0	2309
5.30	30.50	58.30	JEFFERSON	11.20	70.80	W191073	333923	865830	B	12220	09/01/88
						4.20	11.70	1.10		1.0	2183
1.40	28.70	57.70	WALKER	13.60	73.10	W191941	333925	870830	B	13030	09/01/88
						4.80	5.30	1.40		8.5	2804
1.70	33.70	52.20	WALKER	14.10	72.20	W191940	333939	870830	B	13020	09/01/88
						5.10	5.70	1.10		9.0	2678
2.50	30.10	53.90	WALKER	16.00	70.00	W191936	333940	871250	B	12470	09/01/88
						4.80	7.10	1.20		7.5	2912
1.50	37.60	56.50	WALKER	5.90	78.30	W191074	334133	871115	B	14190	09/01/88
						5.30	7.00	1.50		8.5	2273
1.90	33.60	52.70	WALKER	13.70	71.40	W191294	334138	871720	B	12730	09/01/88
						4.90	6.90	1.60		4.5	2804
1.80	32.30	48.40	WALKER	19.30	65.90	W191072	334215	871740	B	11810	09/01/88
						4.70	7.60	1.20		4.5	2912
1.70	34.90	57.40	WALKER	7.70	77.40	W191938	334226	871105	B	13870	09/01/88
						5.50	6.90	0.90		7.5	2534
1.80	27.30	51.90	WALKER	20.80	65.00	W191937	334226	871125	B	11560	09/01/88
						4.50	7.10	0.80		3.0	2912
2.40	31.80	52.10	WALKER	16.10	68.90	W191292	334558	871435	B	12280	09/01/88
						4.70	7.80	1.60		1.5	2912
2.30	26.90	58.10	WALKER	15.00	69.50	W188921	334634	871007	B	12420	09/01/88
						4.70	9.30	0.90		2.0	2912
1.80	33.00	58.10	WALKER	8.90	75.20	W188924	334709	870212	B	13440	09/01/88
						5.20	7.00	1.30		6.0	2183
1.90	37.60	52.50	WALKER	9.90	74.20	W191291	334714	871022	B	13390	09/01/88
						5.20	7.50	1.70		5.0	2696

Coal Field Information Printout for: AL - Alabama

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.80	31.20	55.80	13.00	WALKER	72.30	4.80	0.40	334720	871022	B	12750	09/01/88
								7.90	1.60		1.5	2912
1.70	33.30	56.20	10.50	WALKER	72.70	5.20	3.80	334732	870146	B	13150	09/01/88
								6.60	1.20		4.0	2084
1.70	33.40	57.10	9.50	WALKER	73.50	5.30	4.10	334733	870144	B	13340	09/01/88
								6.20	1.40		4.5	2048
2.40	29.30	57.40	13.30	WALKER	71.50	4.70	0.50	334757	871110	B	12600	09/01/88
								9.00	1.00		1.5	2912
2.40	40.40	51.90	7.70	FAYETTE	75.10	5.50	2.00	335025	873540	B	13620	09/01/88
								8.30	1.40		5.0	2156
PATTON MINE												
2.20	36.90	58.80	4.30	CULLMAN	79.90	5.10	0.70	335835	870455	B	14310	09/01/88
								8.20	1.80		5.5	2804
2.70	21.60	74.60	3.80	CHEROKEE	85.90	4.30	1.30	342804	853252	B	14940	09/01/88
								3.10	1.60		8.0	2102
1.50	22.10	72.50	5.40	CHEROKEE	83.20	4.40	0.80	342848	853208	B	14750	09/01/88
								4.80	1.40		8.5	2561
1.70	19.60	71.00	9.40	CHEROKEE	79.90	4.40	0.90	342940	853237	B	13960	09/01/88
								3.90	1.50		8.0	2759
1.20	19.70	78.30	2.00	DE KALB	87.60	4.50	0.60	343204	853241	B	15340	09/01/88
								3.80	1.50		4.5	2543
7.90	23.70	69.00	7.30	DE KALB	74.40	3.50	0.50	343234	853249	B	12160	09/01/88
								13.00	1.30		0.0	2804
1.30	20.50	75.90	3.60	DE KALB	86.70	4.30	0.90	343238	853203	B	15050	09/01/88
								2.90	1.60		8.5	2408
2.50	21.90	62.30	15.80	DE KALB	73.20	4.00	2.00	343845	853328	B	12870	09/01/88
								3.80	1.20		7.0	2678
1.80	23.80	67.50	8.70	JACKSON	80.70	4.60	0.70	345326	853621	B	14080	09/01/88
								3.90	1.40		7.5	2750

Coal Field Information Printout for

AR - Arkansas

## Coal Field Information Printout for: AR - Arkansas

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
40.80	48.30	38.40	12.30	CLARK		62.90	4.50	0.50	335601	925845	L	10570	09/01/88
									19.00	0.80		0.0	2129
42.00	49.60	43.80	6.60	CLARK		56.10	5.10	1.70	340030	925615	L	11260	09/01/88
									19.60	0.90		0.0	2138
39.10	42.20	26.40	31.40	HOT SPRINGS		48.20	4.40	1.10	342012	924652	L	8640	09/01/88
									14.40	0.50		0.0	2912
STATE ROAD 35													
57.00	53.30	27.90	18.80	SALINE		54.00	4.30	0.50	342843	923220	L	9120	09/01/88
									21.50	0.90		0.0	2912
55.00	47.50	34.70	17.80	SALINE		55.30	4.20	1.30	343402	922330	L	8960	09/01/88
									20.50	0.90		0.0	2912
35.50	40.00	21.90	38.10	PULASKI		41.30	3.80	0.80	343940	921616	L	7130	09/01/88
									15.40	0.60		0.0	2912
4.40	22.60	70.00	7.40	SCOTT		82.20	4.50	0.80	345458	942356	B	14320	09/01/88
									3.40	1.70		8.0	2183
9.70	27.10	68.50	4.40	SEBASTIAN		77.90	3.50	0.70	350002	942100	B	12770	09/01/88
									11.90	1.60		0.0	2245
2.90	21.70	72.20	6.10	SCOTT		84.50	4.30	0.80	350103	914201	B	14580	09/01/88
									2.70	1.60		9.0	2192
2.30	21.10	70.50	8.40	SCOTT		82.00	4.20	1.20	350103	941201	B	14310	09/01/88
									2.60	1.60		9.0	2111
3.10	19.30	74.60	6.10	SEBASTIAN		84.80	4.40	0.60	350514	941635	B	14670	09/01/88
									2.30	1.80		9.0	2084
SUGARLOAF STRIP													
7.40	19.40	74.60	6.00	SEBASTIAN		80.80	3.90	0.60	351008	941937	B	13640	09/01/88
									7.00	1.70		0.0	2363
EAST SIDE US HIGHWAY 71													
4.60	22.60	75.00	2.40	SEBASTIAN		86.60	4.30	0.80	351118	941708	B	14830	09/01/88
									4.10	1.80		0.5	2246
RHODES EXCAVAT STRIP													
3.10	17.30	81.00	1.70	FRANKLIN		87.80	4.50	0.90	351700	935930	B	15210	09/01/88
									3.20	1.90		2.0	2192
4.30	18.30	78.80	2.90	LOGAN		87.20	4.30	0.60	351845	934305	B	14950	09/01/88
									3.20	1.80		0.5	2138
TITAN STRIP													
3.50	16.80	78.70	4.50	LOGAN		85.30	4.30	1.70	351918	934353	B	14860	09/01/88
									2.60	1.60		9.0	2246

Coal Field Information Printout for: AR - Arkansas

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash			Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
1.30	20.70	72.10	72.10	FRANKLIN	82.80	D175929	4.30	3.50	352010	935556	B	14480	09/01/88
									0.60	1.60		9.0	2246
3.60	15.00	74.00	74.00	LOGAN	80.30	D176060	3.50	1.30	352020	933122	B	13640	09/01/88
									2.20	1.70		0.5	2129
GARLAND STRIP				FRANKLIN	82.50	D179993	4.30	3.50	352035	935558	B	14460	09/01/88
1.80	18.90	74.20	74.20						1.20	1.60		9.0	2534
3.50	16.00	76.70	76.70	FRANKLIN	82.70	D175921	4.10	1.30	352522	935701	B	14350	09/01/88
									2.90	1.70		7.0	2417
3.30	14.40	82.50	82.50	JOHNSON	88.90	D175920	4.00	0.60	352705	933510	B	15070	09/01/88
									1.60	1.80		0.5	2192
TITAN STRIP				JOHNSON	83.20	D179991	3.70	1.10	352742	932240	B	14220	09/01/88
2.00	11.20	80.90	80.90						2.50	1.60		0.5	2471
ENERGY DEV CO STRIP				JOHNSON	81.00	D179992	3.60	4.40	353010	932143	B	14000	09/01/88
1.70	12.60	78.00	78.00						0.10	1.50		0.5	2480
2.70	19.30	77.70	77.70	FRANKLIN	88.10	D175919	4.40	0.80	353038	934350	B	15180	09/01/88
									1.70	2.00		9.0	2353
B AND D CO STRIP				FRANKLIN	74.10	D179989	3.80	1.40	353115	934545	B	12910	09/01/88
1.30	16.30	67.60	67.60						3.10	1.50		4.0	2912
PEABODY STRIP				JOHNSON	86.80	D179990	4.20	0.60	353143	944043	B	14940	09/01/88
1.60	18.30	79.30	79.30						2.30	1.70		7.0	2120
9.60	15.70	77.20	77.20	JOHNSON	83.90	D175918	4.10	0.80	353310	932915	B	14370	09/01/88
									2.30	1.80		4.0	2246
JACK LEE MINE				JOHNSON	86.90	D176059	4.30	0.60	353330	933807	B	14990	09/01/88
3.40	18.30	78.40	78.40						3.00	1.90		5.0	2138
HOLE NO 31				POINSETT	41.80	D186849	4.00	0.50	353450	904210	L	7400	09/01/88
34.70	40.10	20.40	20.40						13.60	0.60		0.0	2408
HOLE NO 24				POINSETT	44.20	D186850	3.80	0.90	353525	904200	L	7570	09/01/88
43.70	38.70	27.70	27.70						16.60	0.90		0.0	2408
HOLE NO 27				POINSETT	52.80	D186853	4.50	5.40	353540	903945	L	9250	09/01/88
44.20	46.40	32.30	32.30						15.30	0.70		0.0	2039
HOLE NO 68				CRAIGHEAD	45.90	D186855	3.40	1.70	354930	904630	L	7660	09/01/88
40.10	33.60	32.20	32.20						14.10	0.70		0.0	2300

Coal Field Information Printout for

AZ - Arizona

Coal Field Information Printout for: AZ - Arizona

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Oxygen	Sulfur	Code Number	Latitude	Longitude	Rank	Free Swell	Htg Val	Last Chg
BLACK MESA STRIP MINE	10.40	46.00	51.00	NAVAJO	3.00	75.10	5.30	15.00	0.40	D164637	362230	1102230	SB	13170	0.0	09/01/88
																0
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	14.10	0.40	D179814	362831	1102438	SB	12380	0.0	09/01/88
																2345
	10.20	45.90	48.90	NAVAJO	5.20	73.20	5.30	14.80	0.30	D176231	362831	1102445	SB	12770	0.5	09/01/88
																2174
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	14.10	0.40	D179816	362840	1102430	SB	12380	0.0	09/01/88
																2345
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	14.10	0.40	D179817	362842	1102430	SB	12380	0.0	09/01/88
																2345
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	14.10	0.40	D179818	362843	1102420	SB	12380	0.0	09/01/88
																2345
	8.60	43.80	46.20	NAVAJO	10.00	69.10	4.90	14.30	0.50	D176235	362931	1102352	SB	11940	0.0	09/01/88
																2174
	9.30	44.20	50.00	NAVAJO	5.80	73.00	5.10	14.40	0.40	D176227	363204	1102506	SB	12750	0.0	09/01/88
																2156
	9.30	44.20	50.00	NAVAJO	5.80	73.00	5.10	14.40	0.40	D176229	363209	1102508	SB	12750	0.0	09/01/88
																2156
	10.60	42.80	47.00	NAVAJO	10.20	68.80	4.90	14.20	0.60	D176225	363228	1102531	SB	12050	0.0	09/01/88
																2300
	10.80	43.50	49.50	NAVAJO	7.00	71.60	5.20	14.20	0.80	D179812	363241	1102437	SB	12590	0.0	09/01/88
																2291
	9.30	45.00	45.60	NAVAJO	9.40	70.00	5.10	13.70	0.60	D176226	363242	1102446	SB	12240	0.5	09/01/88
																2201
	11.70	38.80	48.60	NAVAJO	12.60	66.90	4.80	13.90	0.60	D179809	363250	1102456	SB	11730	0.0	09/01/88
																2399
	12.10	42.20	49.70	NAVAJO	8.10	70.30	5.00	14.70	0.60	D179825	363317	1102408	SB	12230	0.0	09/01/88
																2192



**Coal Field Information Printout for**

**CO - Colorado**

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	1.20	27.30	47.10	LAS ANIMAS	25.60	63.30	4.30	0.90	D180091	370815	1044820	B	11250	09/01/88
										4.50	1.40		7.0	2570
	1.40	24.90	47.10	LAS ANIMAS	28.00	60.80	4.20	0.40	D180089	371025	1044820	B	10800	09/01/88
										5.20	1.40		6.0	2804
	0.90	17.40	55.20	LAS ANIMAS	27.40	62.90	2.70	0.80	D180092	371100	1044700	B	10260	09/01/88
										5.00	1.20		0.0	2354
	3.10	33.00	49.20	LA PLATA	17.80	67.30	4.70	0.70	D180094	371505	1080720	B	12030	09/01/88
										8.10	1.40		1.0	2804
	3.40	35.90	54.10	LA PLATA	10.00	73.50	5.10	0.70	D180093	371552	1080820	B	13150	09/01/88
										9.10	1.60		1.5	2804
	7.50	40.00	48.00	HUERFANO	12.00	69.50	5.00	0.80	D184634	374237	1045427	B	12300	09/01/88
										11.40	1.30		0.0	2714
CORLEY MINE	7.50	40.50	48.30	FREMONT	11.20	69.20	4.70	1.20	D175952	381850	1050845	B	12060	09/01/88
										12.50	1.20		0.0	2516
TWIN PINES MINE	8.90	40.50	49.70	FREMONT	9.80	70.90	4.50	0.50	D177496	382020	1051056	B	12180	09/01/88
										13.30	1.00		0.0	2282
HOLE NO SOM-68	6.10	38.00	49.20	GUNNISON	12.80	66.20	5.10	1.40	D177528	385105	1072542	B	11880	09/01/88
										13.30	1.20		0.5	2282
HOLE NO MG-7	8.60	38.10	58.50	GUNNISON	3.40	74.70	5.30	0.70	D177524	385123	1072730	B	12980	09/01/88
										14.30	1.60		0.0	2075
HOLE NO SOM-66	6.30	35.80	48.50	GUNNISON	14.70	65.60	4.80	1.00	D177514	385203	1072602	B	11360	09/01/88
										12.80	1.10		0.5	2417
HOLE NO MG-11	4.70	35.80	48.60	GUNNISON	15.60	66.20	5.10	0.60	D177511	385236	1072816	B	11640	09/01/88
										11.50	1.00		0.5	2732
HOLE NO SOM-53	4.30	32.30	48.00	GUNNISON	19.70	62.30	4.40	0.50	D177501	385311	1072532	B	10880	09/01/88
										11.80	1.30		0.0	2804
HOLE NO SOM-39	5.80	38.10	57.50	GUNNISON	4.40	74.80	5.50	0.60	D177505	385354	1072716	B	13140	09/01/88
										13.10	1.60		0.0	2453
	3.20	38.90	53.60	GUNNISON	7.50	75.40	5.10	0.60	D184647	385540	1072804	B	13570	09/01/88
										9.70	1.70		2.0	2471
	4.50	37.70	56.30	GUNNISON	6.00	76.00	5.40	0.50	D184650	385541	1072656	B	13640	09/01/88
										10.30	1.80		2.0	2552

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
5.30	37.30	37.30	55.40	GUNNISON	7.30	75.20	5.20	D184652	0.60	385557	1072442	B	13400	09/01/88
										10.10	1.60		2.0	2804
CMC MINE				MESA										
5.10	31.40	44.00	44.00	MESA	24.60	58.80	4.10	D180095	1.30	390821	1081834	B	10360	09/01/88
										9.90	1.30		1.0	2633
5.50	37.50	50.00	50.00	MESA	12.50	70.00	4.60	D184655	0.60	390835	1081847	B	12330	09/01/88
										10.70	1.60		1.0	2561
0.80	22.90	69.50	69.50	PITKIN	7.60	82.70	4.70	D184637	0.50	391118	1072039	B	14620	09/01/88
										2.60	1.90		9.0	2426
STATION CREEK				ELBERT										
33.20	43.30	39.20	39.20	ELBERT	17.50	55.70	3.90	D169431	0.40	391547	1041656	L	9070	09/01/88
										21.50	1.00		0.0	0
4.00	40.90	52.90	52.90	GARFIELD	6.20	73.40	5.20	D184636	1.60	392408	1071916	B	13130	09/01/88
										11.70	1.90		0.0	2345
HOLE 9-1				ADAMS										
35.00	39.70	39.20	39.20	ADAMS	21.10	56.00	4.30	D173470	0.50	394718	1044145	L	9460	09/01/88
										17.20	0.90		0.0	0
HOLE 7-11				ADAMS										
32.90	36.20	38.20	38.20	ADAMS	25.60	52.90	4.10	D177499	0.60	394727	1044050	L	8960	09/01/88
										15.90	0.90		0.0	2579
6.90	38.10	53.30	53.30	RIO BLANCO	8.60	71.90	4.90	D186088	0.50	400103	1084445	B	12590	09/01/88
										12.60	1.50		0.0	2705
EAGLE MINE				WELD										
22.30	41.10	53.40	53.40	WELD	5.50	72.20	4.90	D173488	0.50	400245	1045900	SB	12480	09/01/88
										15.40	1.50		0.0	0
10.20	38.40	44.20	44.20	RIO BLANCO	17.40	64.40	4.40	D186078	0.70	400336	1084150	B	11310	09/01/88
										11.70	1.40		0.0	2804
9.50	34.10	39.50	39.50	RIO BLANCO	26.40	56.40	3.80	D186090	0.60	400550	1083920	B	9830	09/01/88
										11.70	1.10		0.0	2309
23.80	32.40	41.00	41.00	RIO BLANCO	26.60	55.20	3.90	D186096	0.70	400932	1074530	B	9600	09/01/88
										12.40	1.20		0.0	2714
12.10	38.20	51.90	51.90	RIO BLANCO	9.90	70.70	4.70	D186086	0.50	400932	1084136	B	12320	09/01/88
										12.70	1.50		0.0	2596
17.10	37.20	45.10	45.10	MOFFAT	17.70	62.30	4.20	D186083	0.50	401328	1084955	B	10710	09/01/88
										14.00	1.30		0.0	2417
15.20	35.60	50.10	50.10	MOFFAT	14.30	65.50	4.40	D186091	0.40	401504	1075216	B	11290	09/01/88
										13.90	1.50		0.0	2354

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
APEX MINE				ROUTT									
7.80	40.80	47.20	12.00			66.70	4.80	0.80	401800	1070158	B	11740	09/01/88
									14.10	1.60		0.5	2579
DH NO 2				ROUTT									
17.10	33.20	46.40	20.40			59.80	4.20	0.50	401811	1070630	B	10250	09/01/88
									14.10	1.00		0.0	2912
DH NO 1				ROUTT									
10.50	38.00	52.40	9.60			69.80	5.10	0.60	401824	1070705	B	12150	08/01/88
									13.90	1.00		0.5	2579
DH NO 5				ROUTT									
9.40	37.90	53.80	8.30			70.70	4.90	0.60	401838	1070547	B	12420	09/01/88
									14.60	0.90		0.5	2579
DH NO 3				ROUTT									
8.00	43.80	48.60	7.60			70.10	5.30	2.80	401907	1070613	B	12540	09/01/88
									12.70	1.50		0.5	2003
DH NO 4				ROUTT									
7.50	37.30	37.80	24.90			55.40	4.40	3.40	401920	1070501	B	10000	09/01/88
									10.70	1.20		0.5	2264
EDNA STRIP MINE				ROUTT									
6.40	40.90	55.90	3.20			75.90	5.10	0.60	402000	1065835	B	13290	09/01/88
									13.50	1.70		0.5	2192
ENERGY NO 1 STRIP MINE				ROUTT									
5.70	37.30	43.80	18.90			62.80	4.50	0.60	402035	1070315	B	11030	09/01/88
									11.60	1.60		0.5	2452
ENERGY NO 1A STRIP MINE				ROUTT									
7.00	41.00	50.80	8.20			71.10	5.00	0.60	402050	1070250	B	12430	09/01/88
									13.30	1.80		0.5	2417
8.20	37.30	54.50	8.20			72.70	4.90	0.50	402055	1070545	B	12900	09/01/88
									11.80	1.90		0.0	2452
ENERGY STRIP MINE NO 2				ROUTT									
10.40	43.50	51.90	4.60			74.10	5.00	0.60	402150	1071100	B	12940	09/01/88
									13.60	2.10		0.0	2138
8.20	38.80	54.20	7.00			73.50	5.10	0.40	402157	1070635	B	13080	09/01/88
									12.10	1.90		0.0	2804
10.80	39.10	41.60	19.30			62.00	4.10	2.50	402206	1070232	B	10990	09/01/88
									10.20	1.90		0.0	2147
10.30	40.10	49.00	10.90			68.40	4.60	1.90	402239	1070401	B	12140	09/01/88
									12.00	2.20		0.0	2111
9.80	39.80	53.00	7.20			72.70	5.00	2.00	402257	1070154	B	12950	09/01/88
									11.00	2.10		0.0	2012
ENERGY NO 3 STRIP MINE				ROUTT									
10.90	41.20	50.70	8.10			69.40	4.90	0.60	402500	1065930	B	12140	09/01/88
									15.30	1.70		0.0	2777

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
8.00	28.40	36.10	35.50	MOFFAT	35.50	47.80	3.30	D173094	0.70	402532	1074714	B	8150	09/01/88
										11.50	1.20		0.0	2615
NO 2 STRIP MINE														
8.00	39.80	50.00	10.20	ROUTT	10.20	89.00	4.90	D176377	0.50	402615	1070715	B	12100	09/01/88
										13.70	1.70		0.5	2741
GRIZZLY CREEK STRIP MINE														
12.00	39.40	49.60	11.00	ROUTT	11.00	68.20	4.70	D184639	0.80	402740	1070310	B	12000	09/01/88
										13.60	1.70		0.0	2804
GRIZZLY CREEK STRIP MINE														
25.20	35.00	34.40	30.80	MOFFAT	30.80	45.00	2.40	D187039	0.30	403130	1073400	SB	6780	09/01/88
										20.60	1.10		0.0	2804
GRIZZLY CREEK STRIP MINE														
17.80	38.90	45.20	15.90	JACKSON	15.90	60.80	4.40	D174484	1.20	403200	1062115	SB	10460	09/01/88
										16.80	0.90		0.0	2516
GRIZZLY CREEK STRIP MINE														
14.50	34.30	28.90	36.80	JACKSON	36.80	44.20	3.50	D174481	0.70	403200	1062415	SB	7630	09/01/88
										14.20	0.60		0.0	0
CANADIAN STRIP MINE														
18.80	37.10	44.40	18.50	MOFFAT	18.50	59.10	4.20	D187042	0.40	403420	1080300	SB	10070	09/01/88
										16.00	1.80		0.0	2354
CANADIAN STRIP MINE														
20.40	39.80	53.30	6.90	MOFFAT	6.90	69.30	4.60	D187041	0.80	403500	1074600	SB	11760	09/01/88
										17.30	1.10		0.0	2155
CANADIAN STRIP MINE														
29.10	36.50	39.90	23.60	MOFFAT	23.60	51.80	2.60	D187040	0.30	403530	1074930	SB	7830	09/01/88
										20.90	0.80		0.0	2291
CANADIAN STRIP MINE														
18.50	45.50	38.80	15.70	MOFFAT	15.70	57.60	4.40	D187045	0.20	403600	1074200	SB	9810	09/01/88
										21.40	0.70		0.0	0
CANADIAN STRIP MINE														
13.50	37.20	49.00	13.80	ROUTT	13.80	65.30	4.40	D184644	0.60	403620	1070654	B	11310	09/01/88
										14.60	1.30		0.0	2552
CANADIAN STRIP MINE														
14.50	37.30	55.20	7.50	JACKSON	7.50	71.90	4.90	D170627	0.20	404127	1060656	SB	12550	09/01/88
										14.30	1.20		0.0	2183
CANADIAN STRIP MINE														
12.80	42.80	51.40	5.80	JACKSON	5.80	72.30	5.10	D172059	0.80	404158	1060655	SB	12800	09/01/88
										14.90	1.10		0.0	2300
MARR NO 1 STRIP MINE														
14.20	41.30	56.30	2.40	JACKSON	2.40	75.00	5.00	D172052	0.20	404255	1060656	SB	13150	09/01/88
										16.20	1.20		0.0	2102
MARR NO 1 STRIP MINE														
1.80	35.70	42.70	21.60	MOFFAT	21.60	64.30	4.50	D166186	0.80	404500	1083730	B	11430	09/01/88
										7.70	1.10		0.0	0

**Coal Field Information Printout for**

**GA - Georgia**

Coal Field Information Printout for: GA - Georgia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Hydrogen	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
				CHATTOGA		W199989	343137	852932	B	14040	09/01/88
1.30	22.30	68.30	9.40		79.60	4.40	4.10	1.50		9.0	2804
				CHATTOGA		W215456	343240	852942	B	15280	09/01/88
1.60	20.80	76.10	3.10		88.00	4.60	1.60	1.60		8.0	2327
				CHATTOGA		W218690	343330	852812	B	11510	09/01/88
1.40	18.20	57.50	24.30		66.50	3.80	3.30	1.20		7.0	2561
				CHATTOGA		W199974	343343	852921	B	15290	09/01/88
1.30	19.50	78.20	2.30		88.50	4.10	2.80	1.60		8.0	2390
				CHATTOGA		W212566	343357	852626	B	14430	09/01/88
1.80	22.30	71.60	6.10		83.10	4.40	4.20	1.50		3.5	2210
				CHATTOGA		W218691	343437	852803	B	12910	09/01/88
2.80	22.40	64.60	13.00		75.30	4.00	5.30	1.30		1.0	2750
				WALKER		W199975	343546	852917	B	14430	09/01/88
1.10	22.00	71.00	7.00		81.00	3.90	4.10	1.50		8.0	2201
				WALKER		W212567	343605	852517	B	11720	09/01/88
3.30	20.00	59.00	21.00		67.60	3.80	4.80	1.00		3.5	2624
				DADE		W199976	344054	852911	B	14660	09/01/88
1.30	21.90	72.30	5.80		83.80	4.50	3.20	1.50		9.0	2489
				DADE		W215454	344428	852912	B	13460	09/01/88
1.40	20.40	67.10	12.50		77.30	4.20	3.80	1.20		6.5	2759
				DADE		W209681	344631	853041	B	13160	09/01/88
2.00	22.80	64.60	12.60		75.70	4.20	5.70	1.10		3.5	2597
				DADE		W209682	344730	852845	B	9550	09/01/88
1.50	18.30	47.00	34.70		55.40	3.30	4.60	0.70		1.0	2804
				DADE		W209680	344756	853101	B	10100	09/01/88
1.70	22.10	46.10	31.80		57.20	3.70	5.50	1.00		5.0	2804
				DADE		W209679	344920	853022	B	12490	09/01/88
1.90	26.20	57.20	16.60		71.40	4.30	5.60	1.00		7.0	2417
				WALKER		W212565	344953	852632	B	15010	09/01/88
3.50	20.70	77.60	1.70		87.30	4.30	4.50	1.70		1.0	2480
				WALKER		W209684	344959	852546	B	15380	09/01/88
1.20	21.00	76.50	2.50		87.30	4.70	3.30	1.70		9.0	2390

Coal Field Information Printout for: GA - Georgia

Location		County		Code Number		Latitude		Longitude		Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
1.10	22.00	75.80	2.20	86.80	W199986	0.80	345031	852648	B	15330	09/01/88	2381
1.50	20.70	67.80	11.50	74.80	W199984	4.50	345033	852645	B	13340	09/01/88	2210
1.30	20.80	76.10	3.10	87.30	W199983	0.60	345043	852712	B	15110	09/01/88	2804
1.10	20.60	75.50	2.90	87.60	W212563	0.60	345049	852442	B	15200	09/01/88	2552
1.50	20.70	69.30	10.00	79.90	W212554	1.50	345115	852625	B	13990	09/01/88	2696
1.30	20.70	71.80	7.50	80.90	W199987	0.70	345158	852508	B	14340	09/01/88	2804
1.40	23.20	74.60	2.20	86.50	W209683	0.50	345231	852518	B	15240	09/01/88	2507
1.50	21.20	76.70	2.10	85.80	W199888	0.50	345330	852422	B	15210	09/01/88	2399
1.80	21.60	52.10	26.30	62.20	W209677	0.90	345440	853122	B	10950	09/01/88	2804
2.10	25.70	57.50	16.80	71.00	W209678	0.50	345639	853533	B	12450	09/01/88	2804
5.70	27.10	64.40	8.50	74.70	W199979	0.50	345653	853037	B	12490	09/01/88	2201
1.40	27.50	64.80	7.70	75.60	W199981	4.70	345655	853047	B	14080	09/01/88	2327
6.20	24.30	63.20	12.50	70.20	W199980	0.50	345702	853044	B	11880	09/01/88	2804
1.30	26.50	59.10	14.40	72.00	W218692	4.40	345714	853010	B	13030	09/01/88	2003
1.50	24.30	64.80	10.90	77.90	W199977	0.90	345756	853108	B	13680	09/01/88	2804
1.40	27.40	66.70	5.90	80.60	W199978	3.10	345804	853116	B	14470	09/01/88	2210



Coal Field Information Printout for: GA - Georgia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
1.50	28.40	69.10	2.50	DADE	85.90	5.00	0.50	34.5818	853356	B	15190	09/01/88
						W199982		4.50	1.60		9.0	2372

Coal Field Information Printout for

IA - Iowa

Coal Field Information Printout for: IA - Iowa

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Code Number Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
12.20	38.70	49.20	DAVIS	67.00	4.50	D179838	403750	922545	B	12110	09/01/88
							10.40	0.80		1.0	2111
4.70	32.20	37.10	APPANOOSE	48.40	3.40	D176178	404242	925158	B	8890	09/01/88
							7.90	0.90		0.5	2084
3.30	39.50	47.10	APPANOOSE	66.80	4.50	D186070	404315	923835	B	11900	09/01/88
							8.40	1.20		1.0	2111
2.70	23.90	49.50	DAVIS	55.20	4.30	D186069	405254	921625	B	10300	09/01/88
							8.20	0.90		1.0	2372
2.80	39.60	44.50	APPANOOSE	63.90	4.40	D186071	405322	923824	B	11760	09/01/88
							6.60	1.10		1.0	2147
5.70	42.80	44.30	WAPELLO	68.40	4.50	D176169	405403	922439	B	11900	09/01/88
							9.20	1.10		1.0	2129
4.30	36.80	38.30	JEFFERSON	51.80	4.00	D186067	405456	921040	B	9680	09/01/88
							8.30	1.10		0.0	2012
12.50	44.60	45.80	WAPELLO	71.40	5.30	D179851	405950	923145	B	12890	09/01/88
							8.80	0.90		1.5	1958
9.80	42.90	45.70	WAPELLO	69.50	4.90	D166043	410000	923000	B	12690	09/01/88
							6.80	1.10		0.0	0
13.10	43.30	41.20	MONROE	64.90	4.50	D166035	410000	925230	B	11500	09/01/88
							9.40	1.30		0.0	0
11.90	42.00	42.70	MONROE	65.30	4.70	D166037	410000	930000	B	11830	09/01/88
							9.20	1.40		0.0	0
7.00	42.70	32.90	WAPELLO	57.70	4.10	D186072	410017	923715	B	10230	09/01/88
							7.10	1.00		1.0	2516
13.60	43.90	45.30	WAPELLO	70.50	5.00	D179847	410154	923817	B	12700	09/01/88
							8.50	1.00		1.5	2111
9.90	36.00	39.40	WAPELLO	56.00	4.00	D176188	410221	923107	B	10260	09/01/88
							5.50	0.90		0.5	2138
14.00	31.70	42.30	WAPELLO	53.20	3.70	D176189	410238	923125	B	9500	09/01/88
							5.80	1.00		0.0	2030
9.10	31.00	32.90	WAPELLO	37.80	2.70	D179843	410240	923645	B	7600	09/01/88
							1.70	0.60		0.0	2237

## Coal Field Information Printout for: IA - Iowa

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
LOVILLA NO 2 MINE													
16.20	40.30	44.30	44.30	MONROE	15.40	67.50	4.30	3.80	410310	923410	B	12110	09/01/88
									7.60	1.40		1.0	2111
15.10													
	40.20	41.90	41.90	MONROE	17.90	65.30	4.50	3.70	410310	930410	B	11630	09/01/88
									7.30	1.30		1.0	2156
17.00													
	38.70	48.20	48.20	LUCAS	13.10	68.40	4.40	6.10	410636	930950	B	12330	09/01/88
									6.60	1.40		1.0	2201
14.50													
	38.20	47.10	47.10	MAHASKA	14.70	65.50	4.40	6.20	410730	924500	B	11890	09/01/88
									8.00	1.20		0.0	0
11.10													
	43.10	46.00	46.00	MAHASKA	10.90	67.80	5.20	6.30	411029	923445	B	12260	09/01/88
									8.70	1.10		1.5	2084
15.40													
	39.60	44.90	44.90	MAHASKA	15.50	64.10	4.50	8.40	411128	924515	B	11760	09/01/88
									6.60	0.90		1.0	2111
13.90													
	38.80	45.60	45.60	MAHASKA	15.50	61.90	4.40	10.30	411135	924540	B	11490	09/01/88
									6.90	0.90		1.0	2255
13.00													
	43.40	44.20	44.20	MAHASKA	12.40	68.80	4.90	5.40	411340	924720	B	12570	09/01/88
									7.60	0.90		1.0	2255
STAR MINE													
13.10	39.80	42.70	42.70	MAHASKA	17.50	61.90	4.40	7.90	411340	924800	B	11310	09/01/88
									7.30	1.00		1.0	2111
12.20													
	40.00	40.30	40.30	MAHASKA	19.70	61.10	4.20	6.80	411445	923642	B	11090	09/01/88
									7.20	1.00		1.0	2111
15.60													
	42.20	45.40	45.40	MAHASKA	12.40	68.40	4.70	4.50	411715	924438	B	12340	09/01/88
									8.80	1.20		1.0	2201
21.10													
	40.10	45.70	45.70	MARION	14.20	64.70	4.30	4.10	412615	930140	B	11470	09/01/88
									11.60	1.10		0.0	2102
14.50													
	41.80	40.40	40.40	MARION	17.80	63.20	4.30	2.90	412915	931225	B	10980	09/01/88
									10.70	1.10		2.0	2786
12.10													
	38.00	43.80	43.80	LUCAS	18.20	63.70	4.40	2.60	420000	930730	B	11290	09/01/88
									9.70	1.40		0.0	0

Coal Field Information Printout for

ID - Idaho

Coal Field Information Printout for: ID - Idaho

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
COAL BANKS SPRING MINE				CASSIA									
8.80	38.60	30.30	31.10	46.60	4.20	2.50	420413	1135908	L	8230	0.0	0.0	09/01/88
													2192
20.70	39.70	31.30	29.00	44.90	3.50	1.80	431451	1164637	L	7390	0.0	0.0	09/01/88
													2408
BROWN BEAR MINE				TETON									
3.30	36.40	50.70	12.90	69.60	5.20	0.50	434310	1111822	B	12220	0.0	0.0	09/01/88
													2453
PINTAR MINE				TETON									
4.40	38.60	51.00	10.40	69.80	4.90	0.60	434425	1112008	B	12170	0.0	0.0	09/01/88
													2174

Coal Field Information Printout for

IL - Illinois

Coal Field Information Printout for: IL - Illinois

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
3.50	38.20	50.20	11.60	PERRY	58.40	4.90	4.00	380059	893312	B	12230	1.0	09/01/88
								10.10	1.00			1.0	2057
4.10	36.40	56.30	7.30	PERRY	72.30	4.80	3.80	380101	893305	B	12870	1.5	09/01/88
								10.70	1.10			1.5	1967
5.50	39.30	53.90	6.80	PERRY	72.70	5.10	3.60	380101	893307	B	13020	1.0	09/01/88
								10.80	1.00			1.0	1967
5.70	40.80	52.00	7.20	PERRY	73.30	5.10	3.00	380101	893308	B	13020	2.5	09/01/88
								10.10	1.30			2.5	2129
4.40	38.50	47.30	14.20	FRANKLIN	63.90	4.60	5.10	380206	885748	B	11960	5.0	09/01/88
								6.80	1.40			5.0	2129
4.70	40.20	51.10	8.70	FRANKLIN	73.40	5.20	2.80	380206	885754	B	13270	4.5	09/01/88
								8.30	1.60			4.5	2264
6.20	35.10	62.30	2.60	JEFFERSON	78.50	5.20	0.80	380850	890350	B	13940	1.0	09/01/88
								11.90	1.20			1.0	2156
5.60	40.40	51.10	8.50	MONTGOMERY	71.10	5.20	2.90	390502	892048	B	12660	2.5	09/01/88
								11.10	1.20			2.5	2129
8.10	40.40	51.00	8.60	MONTGOMERY	69.40	5.10	4.40	390505	892045	B	12320	1.0	09/01/88
								12.00	0.50			1.0	1823
6.40	43.70	46.80	9.50	MONTGOMERY	73.10	5.50	3.20	390505	892050	B	13290	1.0	09/01/88
								7.80	0.90			1.0	2129
4.10	36.70	53.20	10.10	JEFFERSON	71.00	4.90	2.70	390808	890930	B	12610	1.0	09/01/88
								10.20	1.10			1.0	2012
11.80	40.40	49.20	10.40	MACOUPIN	69.30	4.90	4.10	392839	894336	B	12340	4.0	09/01/88
								10.10	1.20			4.0	2066
4.20	38.60	55.20	6.20	FULTON	73.20	5.30	3.10	401730	902230	B	13220	1.0	09/01/88
								10.70	1.50			1.0	2057
2.80	38.20	51.40	10.40	FULTON	71.80	5.10	2.00	402600	900100	B	12860	3.5	09/01/88
								9.30	1.40			3.5	2255
3.10	38.60	54.70	6.70	PEORIA	73.90	5.20	5.50	404400	895640	B	13290	4.5	09/01/88
								7.50	1.20			4.5	2111
3.70	38.50	50.50	11.00	KNOX	67.90	4.90	4.90	410230	901345	B	12290	1.0	09/01/88
								10.20	1.10			1.0	1994



Coal Field Information Printout for

IN - Indiana

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	8.70	36.00	51.30	WARRICK	66.60	4.70	W191039	375738	872046	B	12000	09/01/88
								9.60	1.50		1.0	2048
STRIP	10.00	37.70	53.30	WARRICK	71.70	5.10	W191040	375739	872046	B	12810	09/01/88
								10.00	1.60		1.0	2246
WRIGHT MINE				WARRICK			D173482	375818	871504	B	13120	09/01/88
	10.80	42.60	49.20		72.80	5.20		9.00	1.50		0.0	0
STRIP	8.40	34.60	51.80	WARRICK	66.00	4.50	W190932	380047	871539	B	11790	09/01/88
								9.40	1.30		0.0	1994
STRIP	11.00	37.30	57.80	SPENCER	75.90	5.30	W191038	380102	855624	B	13440	09/01/88
								10.50	1.80		1.0	2228
STRIP	9.50	40.10	50.30	PERRY	70.00	5.00	W192518	380105	864000	B	12750	09/01/88
								8.20	1.30		1.5	2615
STRIP	8.10	39.30	50.80	PERRY	59.10	4.90	W192616	380105	864001	B	12830	09/01/88
								8.80	1.30		1.0	2507
CORUM PIT NO 1	12.70	41.00	55.80	SPENCER	72.60	4.90	W188934	380126	855812	B	13050	09/01/88
								16.60	0.90		0.0	1958
STRIP	8.50	40.80	51.90	SPENCER	71.00	5.20	W191062	380208	865732	B	12950	09/01/88
								11.20	1.10		1.0	1994
STRIP	7.80	38.90	53.60	SPENCER	70.70	5.10	W191041	380208	865733	B	12840	09/01/88
								10.70	1.40		1.0	2048
STRIP	9.80	36.40	56.30	SPENCER	70.80	4.90	W191048	380212	865731	B	12720	09/01/88
								11.10	1.60		1.0	2083
STRIP	10.70	35.50	57.60	SPENCER	72.30	5.10	W191050	380213	865731	B	12860	09/01/88
								10.10	1.10		1.0	2102
PAINTER PIT	5.70	40.60	51.10	SPENCER	68.30	5.10	W188936	380219	865708	B	12700	09/01/88
								11.10	1.00		1.0	2075
STRIP	9.70	38.20	48.70	WARRICK	67.00	4.80	W192615	380345	872511	B	12030	09/01/88
								9.40	1.60		1.0	2129
STRIP	9.60	38.50	49.30	WARRICK	58.20	4.80	W192614	380345	872512	B	12260	09/01/88
								8.90	1.50		1.0	2120
STRIP	7.80	38.70	52.80	WARRICK	71.70	4.90	W191044	380514	871544	B	12940	09/01/88
								9.90	1.50		3.5	2021

## Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	8.20	39.00	51.20	WARRICK	69.90	W191045	5.00	3.70	380514	871545	B	12650
								10.10	1.50		2.0	2111
STRIP	8.00	40.80	49.50	WARRICK	69.30	W191057	4.90	4.70	380516	871615	B	12610
								10.40	1.00		1.0	1931
STRIP	9.00	39.30	51.20	WARRICK	70.20	W191058	5.20	4.20	380517	871615	B	12710
								9.80	1.10		2.0	1976
MS NO 2 PIT	8.60	37.60	52.10	WARRICK	71.40	W193122	5.00	2.80	380534	871544	B	12830
								9.10	1.40		4.0	2327
LYNNVILLE III PIT	14.60	33.70	59.60	WARRICK	75.40	W193124	4.80	1.10	380542	871403	B	13290
								10.10	1.90		1.0	2651
STRIP	8.90	40.00	45.50	WARRICK	67.30	W191052	4.60	3.40	380654	872432	B	12000
								9.10	1.10		1.0	2273
STRIP	10.60	36.20	47.50	WARRICK	63.50	W192625	4.40	5.30	380715	872102	B	11480
								9.00	1.50		1.0	2309
STRIP	10.00	38.70	49.60	WARRICK	67.90	W192624	4.90	4.70	380716	872102	B	12230
								9.20	1.60		1.0	2408
STRIP	9.40	40.80	49.80	WARRICK	70.80	W192626	4.90	3.60	380718	872057	B	12650
								9.80	1.50		1.0	2102
NO 3 KAETZEL PIT	3.80	39.10	51.10	SPENCER	71.60	W194391	4.90	3.30	380744	865526	B	12920
								8.90	1.50		3.5	2147
NO 3 KAETZEL PIT	3.80	40.30	51.70	SPENCER	73.90	W194392	5.00	2.80	380747	865526	B	13240
								8.80	1.50		4.0	2165
STRIP	10.10	36.50	53.60	SPENCER	70.30	W191034	4.90	2.90	380835	865554	B	12600
								10.60	1.40		1.0	2111
STRIP	15.90	35.90	56.30	SPENCER	71.40	W191037	4.70	0.80	380835	865555	B	12320
								13.90	1.40		0.0	2264
STRIP	8.80	35.40	53.60	SPENCER	69.70	W191035	5.00	2.40	380847	865751	B	12490
								10.50	1.40		1.0	2291
STRIP	8.40	35.40	50.70	SPENCER	67.60	W191036	4.80	2.40	380847	865752	B	12000
								10.00	1.30		1.0	2282
LYNNVILLE MINE	11.30	39.70	47.60	WARRICK	69.50	D173487	4.80	3.80	381030	870735	B	12440
								7.80	1.40		0.0	0

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	9.80	36.00	53.90	WARRICK	10.10	68.00	4.90	4.80	W190530	381352	871312	B	12230	09/01/88
										11.20	1.00		1.0	2084
LOHR PIT	9.50	36.60	56.30	PIKE	7.10	74.80	5.00	1.50	W188930	381356	871802	B	13040	09/01/88
										10.10	1.50		1.5	2138
STRIP	6.30	42.00	48.80	PIKE	9.20	69.80	5.30	4.50	W190528	381606	871736	H	12690	09/01/88
										10.00	1.20		4.0	1967
STRIP	8.00	44.20	46.90	PIKE	8.90	71.30	5.20	3.90	W192630	381810	870846	H	13000	09/01/88
										9.10	1.60		4.0	2012
STRIP	9.40	43.30	47.10	PIKE	9.60	70.20	5.00	4.60	W192631	381810	870847	B	12790	09/01/88
										9.10	1.50		1.0	1984
PIT NO 4	5.10	35.90	47.50	GIBSON	16.60	65.10	4.60	3.70	W194396	381855	872210	B	11680	09/01/88
										8.50	1.50		2.0	2426
PIT NO 4	6.20	39.70	46.80	GIBSON	13.50	66.60	4.70	5.10	W194397	381855	872220	H	12040	09/01/88
										8.60	1.50		3.0	2219
STRIP	9.70	45.20	46.50	PIKE	8.30	74.00	5.10	3.50	D173480	382005	871504	B	13230	09/01/88
										7.70	1.40		0.0	0
HOPF NO 2 PIT	2.10	39.80	46.30	DUBOIS	13.90	66.10	4.70	7.90	W194393	382038	870129	B	12240	09/01/88
										6.20	1.20		5.0	2156
HOPF NO 2 PIT	2.20	41.00	45.40	DUBOIS	13.60	66.90	4.80	6.50	W194394	382038	870130	B	12330	09/01/88
										7.00	1.20		5.0	2264
STRIP	6.70	35.20	56.40	PIKE	8.40	71.10	5.30	2.90	W190929	382109	870609	B	12790	09/01/88
										10.80	1.50		1.0	2156
STRIP	7.60	38.90	52.40	PIKE	8.70	70.70	5.10	3.90	W190930	382109	870610	B	12680	09/01/88
										10.10	1.50		1.0	2111
STRIP	10.00	33.20	59.10	PIKE	7.70	71.40	4.90	2.80	W190931	382210	871512	B	12690	09/01/88
										11.60	1.60		1.0	2219
STRIP	11.10	35.50	48.30	DUBOIS	16.20	67.00	4.50	3.30	W192620	382224	870058	B	12010	09/01/88
										7.70	1.30		1.0	2129
STRIP	9.70	35.90	55.40	DUBOIS	8.70	72.50	5.00	2.80	W192622	382225	870058	B	12960	09/01/88
										9.60	1.40		1.0	2507
STRIP	9.00	39.60	53.70	PIKE	6.70	74.20	5.30	1.50	W191056	382238	871405	B	13150	09/01/88
										11.20	1.10		1.0	2579

## Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
STRIP	9.20	37.80	53.30	PIKE	8.90	70.80	5.00	3.30	W191055	382239	871405	B	12600	09/01/88
										10.50	1.50		1.0	2057
STRIP	7.60	38.30	53.00	PIKE	8.70	71.20	5.40	3.70	W190532	382528	871236	B	12810	09/01/88
										9.90	1.10		1.5	2048
STRIP	16.20	39.10	58.50	CLAY	2.40	80.30	5.10	1.00	W192634	382530	870552	B	14180	09/01/88
										9.50	1.70		1.0	2354
R&H MINE	9.50	43.20	47.40	PIKE	9.40	71.40	5.00	5.90	D173483	382530	871642	B	12990	09/01/88
										7.00	1.30		0.0	0
REESE PIT	8.40	36.00	49.80	PIKE	14.20	68.70	4.90	1.50	W188932	382542	871658	B	12110	09/01/88
										9.20	1.50		1.5	2336
STRIP	11.10	38.90	56.90	MARTIN	4.20	75.60	4.90	4.10	W192629	383446	865235	B	13790	09/01/88
										9.70	1.50		1.0	2093
STRIP	12.10	36.60	46.30	MARTIN	17.10	65.90	4.70	1.10	W192628	383447	865235	B	11720	09/01/88
										9.80	1.40		1.0	2804
NEWELL PIT NO 1	11.20	40.90	49.80	KNOX	9.30	72.10	5.20	3.50	W188948	385327	871414	B	12960	09/01/88
										8.50	1.40		4.0	2129
STRIP	6.30	41.30	47.90	KNOX	10.80	70.80	4.70	3.40	D172303	385345	871455	B	12720	09/01/88
										9.00	1.30		0.0	0
STRIP	7.50	38.50	44.90	SULLIVAN	16.60	66.10	4.70	3.80	D172304	385720	871530	B	11920	09/01/88
										7.50	1.30		0.0	0
STRIP	6.50	46.50	46.50	GREENE	7.00	74.80	5.40	2.70	D172305	390250	870340	B	13670	09/01/88
										8.70	1.40		0.0	0
HUGGER	15.00	33.40	58.20	SULLIVAN	8.40	75.10	4.90	0.40	W193120	390349	872023	B	13200	09/01/88
										9.60	1.60		1.0	2804
STRIP	12.70	35.90	53.70	SULLIVAN	10.40	71.30	5.40	1.60	W191049	390447	871522	B	12760	09/01/88
										10.20	1.10		1.0	2399
STRIP	11.50	37.20	50.60	SULLIVAN	12.20	69.90	5.00	1.80	W191046	390447	871523	B	12440	09/01/88
										9.60	1.50		1.0	2381
JH&L COAL CO PIT NO 7	8.40	41.60	51.50	GREENE	6.90	72.40	5.20	2.90	W188946	390458	871250	B	13080	09/01/88
										11.20	1.40		1.5	2012
STRIP	8.80	36.30	54.60	SULLIVAN	9.10	74.80	4.80	0.40	D172309	390550	872010	B	13150	09/01/88
										9.30	1.60		0.0	0

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	9.70	39.40	50.30	GREENE	10.30	70.10	W191042	2.80	390654	871049	B	12600	09/01/88
							5.10		10.10	1.60		1.0	2084
STRIP	9.30	36.20	52.70	GREENE	11.10	69.30	W191051	3.10	390654	871050	B	12470	09/01/88
							4.60		10.70	1.20		1.0	2156
STRIP	6.30	41.00	47.50	SULLIVAN	11.50	70.60	D172308	2.70	390840	871940	B	12730	09/01/88
							4.90		8.90	1.40		0.0	0
STRIP	5.00	41.30	46.00	SULLIVAN	12.70	68.50	D172307	4.70	391135	871709	B	12480	09/01/88
							4.80		8.00	1.30		0.0	0
STRIP	13.80	36.20	53.50	SULLIVAN	10.30	69.90	W192635	3.80	391148	872106	B	12470	09/01/88
							4.70		9.80	1.50		1.0	2129
BIRDSONG MINE	5.70	42.30	48.30	SULLIVAN	9.40	71.80	W194389	3.90	391235	871439	B	13020	09/01/88
							5.30		8.30	1.30		4.0	2246
BIRDSONG MINE	4.60	44.90	46.10	SULLIVAN	9.00	71.80	W194388	3.40	391235	871440	B	13060	09/01/88
							4.80		9.70	1.30		5.0	2552
STRIP	9.10	35.80	56.10	CLAY	8.10	71.50	W190934	2.90	391245	871142	B	12810	09/01/88
							5.00		11.00	1.50		1.0	2057
STRIP	6.60	38.30	43.70	CLAY	18.00	65.50	D172302	2.50	391245	871210	B	11760	09/01/88
							4.60		8.00	1.40		0.0	0
PIT NO 2	13.90	33.30	57.10	OWEN	9.60	73.40	W193119	2.00	391434	870136	B	13010	09/01/88
							4.70		8.90	1.40		1.0	2246
STRIP	21.40	34.40	55.70	OWEN	9.90	68.80	W190538	0.50	391634	870205	B	11480	09/01/88
							4.10		15.60	1.10		0.0	2912
STRIP	5.70	37.90	53.20	OWEN	8.90	74.50	D172306	2.20	391655	865735	B	13170	09/01/88
							4.80		8.20	1.40		0.0	0
STRIP	15.60	32.10	57.70	OWEN	10.20	70.50	W190534	2.00	391710	865736	B	12380	09/01/88
							4.50		11.70	1.10		0.0	2678
BLUE HOLE NO 1 PIT	12.30	42.50	49.40	VIGO	8.10	73.30	W188944	3.10	392204	871627	B	13140	09/01/88
							5.40		8.70	1.40		2.5	2093
STRIP	15.60	36.50	57.80	CLAY	5.70	76.90	W190542	0.80	392407	870614	B	13640	09/01/88
							5.30		9.90	1.40		1.0	2912
STRIP	13.70	26.00	66.90	CLAY	7.10	75.40	W190546	1.00	392504	871400	B	13330	09/01/88
							4.70		10.80	1.00		1.5	2417

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fixed Carbon	Ash	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
							Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	16.10	35.90	58.60	5.50	CLAY	77.80	1.00	W19233	392530	870552	B	13680	09/01/88
								5.40	8.80	1.50		1.0	2768
STRIP	15.40	36.10	57.50	6.40	CLAY	76.60	0.90	W192E32	392531	870552	B	13630	09/01/88
								5.10	9.50	1.50		1.0	2786
STRIP	12.00	35.00	49.50	15.50	CLAY	65.00	2.80	W190548	392635	871150	B	11900	09/01/88
								4.70	10.00	1.00		1.0	2597
TURNER PIT NO 1	13.00	42.30	49.70	8.00	CLAY	72.40	4.70	W188940	392945	870922	B	13080	09/01/88
								5.20	8.20	1.50		1.5	2084
STRIP	13.00	25.90	65.30	6.80	CLAY	74.80	1.60	W190544	393255	870618	B	13360	09/01/88
								4.90	10.60	1.30		2.0	2399
STRIP	13.10	37.10	55.80	7.10	CLAY	74.00	1.70	W190536	393603	870613	B	13140	09/01/88
								4.80	11.20	1.20		1.0	2201
UNIVERSAL SOUTH PIT NO 2	10.30	40.20	45.40	14.40	VIGO	66.30	4.20	W188950	393524	872856	B	12080	09/01/88
								4.90	9.00	1.20		2.5	2129
TURNER PIT	14.10	40.40	51.70	7.90	PARKE	74.20	2.20	W188938	393627	870601	B	13130	09/01/88
								5.30	9.00	1.40		1.0	2246
UNIVERSAL SOUTH PIT NO 2	10.80	36.00	41.60	22.40	VERMILLION	60.50	3.30	W188952	393741	872951	B	10770	09/01/88
								4.50	8.40	0.90		1.5	2138
BAIRD PT	10.00	39.10	49.50	11.40	VERMILLION	66.90	5.70	W193121	395344	873017	B	12300	09/01/88
								5.00	9.70	1.30		1.0	2057
STRIP	11.00	36.10	49.00	14.90	VERMILLION	63.80	5.40	W191059	395344	873018	B	11560	09/01/88
								4.60	10.40	0.90		1.0	1994
STRIP	11.60	36.10	50.90	13.00	VERMILLION	67.50	3.60	W191054	395344	873019	B	12060	09/01/88
								4.70	10.20	1.00		1.0	2066
STRIP	9.20	40.30	48.10	11.60	VERMILLION	66.90	4.80	W191043	395427	873046	B	12160	09/01/88
								5.20	10.20	1.30		1.0	1985
STRIP	13.30	39.60	45.30	15.10	FOUNTAIN	65.00	7.20	D172310	395755	872455	B	12020	09/01/88
								4.50	7.00	1.20		0.0	0

Coal Field Information Printout for

KS - Kansas



## Coal Field Information Printout for: KS - Kansas

Location		Moisture	Volatiles	Fxd Crbn	County		Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
					Ash			Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
WILKINSON INC MINE	3.30	32.30	52.10	CHEROKEE	15.60	70.50	D176054	4.40	4.20	371500	944210	B	12470	09/01/88
										4.10	1.20		7.5	1976
WILKINSON INC MINE	3.30	32.30	52.10	CHEROKEE	15.60	70.50	D176053	4.40	4.20	371500	944212	B	12470	09/01/88
										4.10	1.20		7.5	1976
CLEMENS NO 25 MINE	2.30	34.20	44.30	CRAWFORD	21.50	59.00	D180069	3.90	12.60	372121	943910	B	11230	09/01/88
										2.10	0.90		7.5	2507
CLEMENS NO 25 MINE	2.50	34.80	44.90	CRAWFORD	20.30	61.50	D180071	4.50	10.50	372128	943902	B	11610	09/01/88
										2.20	1.00		8.5	2417
CLEMENS NO 25 MINE	3.90	36.00	50.20	CRAWFORD	13.80	68.50	D180073	4.60	7.00	372135	943845	B	12630	09/01/88
										5.10	1.00		9.0	2237
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	17.50	65.80	D176050	4.50	8.40	372150	943908	B	12150	09/01/88
										2.70	1.10		6.0	2066
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	17.50	65.80	D176051	4.50	8.40	372151	943908	B	12150	09/01/88
										2.70	1.10		6.0	2066
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	17.50	65.80	D176052	4.50	8.40	372417	943908	B	12150	09/01/88
										2.70	1.10		6.0	2066
DELL LAMB MINE	5.50	38.50	44.10	WILSON	17.40	65.60	D176056	4.40	4.70	373009	953331	B	11810	09/01/88
										6.30	1.60		4.0	1976
DELL LAMB MINE	5.50	38.50	44.10	WILSON	17.40	65.60	D176055	4.40	4.70	373009	953333	B	11810	09/01/88
										6.30	1.60		4.0	1976
CLEMENS NO 22 MINE	1.90	36.90	44.50	CRAWFORD	18.60	66.70	D176045	4.60	5.20	373608	943955	B	11940	09/01/88
										3.70	1.20		6.0	1949
CLEMENS NO 22 MINE	2.20	38.80	48.10	CRAWFORD	13.10	71.90	D176046	4.90	3.50	373620	943955	B	12830	09/01/88
										5.30	1.30		7.5	2102
CLEMENS NO 22 MINE	2.20	38.80	48.10	CRAWFORD	13.10	71.90	D176047	4.90	3.50	373623	943955	B	12830	09/01/88
										5.30	1.30		7.5	2102
CLEMENS NO 22 MINE	2.60	36.20	51.30	CRAWFORD	12.50	72.10	D176048	4.80	4.80	373627	943955	B	12980	09/01/88
										4.50	1.30		8.0	1940
CLEMENS NO 22 MINE	2.60	36.20	51.30	CRAWFORD	12.50	72.10	D176049	4.80	4.80	373630	943955	B	12980	09/01/88
										4.50	1.30		8.0	1940
CLEMENS NO 22 MINE	2.60	36.80	44.00	CRAWFORD	19.20	67.10	D183115	4.50	3.90	373638	944010	B	12000	09/01/88
										4.20	1.10		8.5	2048

Coal Field Information Printout for: KS - Kansas

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
CLEMENS NO 22 MINE				CRAWFORD									
2.30	37.40	48.50	14.10		70.90		5.00	4.90	373640	944010	B	12990	09/01/88
									3.90	1.20		8.0	2264
BILLS COAL CO, FT SCOTT MINE				BOURBON									
3.50	37.90	47.90	14.20		69.70		4.90	4.80	374508	943737	B	12850	09/01/88
									5.30	1.10		9.0	2012
				FRANKLIN									
3.30	41.10	52.00	6.90		73.70		5.00	1.70	382743	952748	B	12980	09/01/88
									10.70	2.00		2.5	2102

Coal Field Information Printout for

KY - Kentucky

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				BELL										
2.10	31.80	46.10	22.10	BELL		64.40	4.80	W208201	0.70	361114	833711	B	11500	09/01/88
										6.20	1.80		5.0	2741
SURFACE MINE				BELL										
1.90	37.40	55.00	7.60	BELL		77.10	5.10	W215409	0.80	363515	834523	B	13730	09/01/88
										7.50	1.90		4.5	2678
SURFACE MINE				BELL										
1.80	37.80	51.20	11.00	BELL		73.30	5.20	W215391	2.50	363600	834650	B	13320	09/01/88
										6.30	1.70		5.0	2282
SURFACE MINE				BELL										
1.80	38.10	58.60	3.30	BELL		81.90	5.50	W215390	0.70	363601	834648	B	14860	09/01/88
										6.70	1.90		6.5	2587
SURFACE MINE				BELL										
2.10	28.30	32.20	39.50	BELL		47.70	3.70	W215421	0.90	363603	834701	B	8480	09/01/88
										7.00	1.20		1.0	2804
SURFACE MINE				BELL										
2.50	35.60	60.80	3.60	BELL		80.20	5.30	W215389	0.80	363606	834700	B	14470	09/01/88
										8.30	1.80		4.5	2723
SURFACE MINE				BELL										
2.30	38.50	56.50	5.00	BELL		79.90	5.40	W215392	1.20	363610	834655	B	14340	09/01/88
										6.50	2.00		6.0	2543
SURFACE MINE				BELL										
1.90	33.60	51.00	15.40	BELL		69.50	4.60	W215423	2.20	363614	834659	B	12490	09/01/88
										6.50	1.80		3.5	2480
SURFACE MINE				BELL										
1.80	39.60	56.70	3.70	BELL		80.00	5.60	W215424	0.70	363614	834702	B	14530	09/01/88
										8.00	2.00		4.0	2723
SURFACE MINE				BELL										
2.30	37.30	57.60	5.10	BELL		78.80	5.30	W215425	1.40	363615	834704	B	14190	09/01/88
										7.50	1.90		2.0	2147
SURFACE MINE				MCCREARY										
3.10	36.80	58.50	4.70	MCCREARY		79.70	5.30	W212496	0.70	363655	842509	B	14260	09/01/88
										7.60	2.00		3.0	2498
SURFACE MINE				MCCREARY										
2.90	37.60	55.60	6.80	MCCREARY		78.00	5.20	W212495	0.90	363656	842513	B	13920	09/01/88
										7.30	1.80		4.0	2804
UNDERGROUND MINE				BELL										
2.40	31.50	46.40	22.10	BELL		63.60	4.30	W207897	2.30	363711	834916	B	11480	09/01/88
										6.10	1.60		5.0	2633
UNDERGROUND MINE				BELL										
2.50	33.90	53.70	12.40	BELL		73.70	4.90	W207866	0.70	363729	834913	B	13030	09/01/88
										6.50	1.80		4.0	2696
SURFACE MINE				WHITLEY										
2.20	35.90	61.20	2.90	WHITLEY		81.40	5.30	W215397	0.90	363729	841158	B	14590	09/01/88
										7.40	2.10		4.0	2138
UNDERGROUND MINE				BELL										
3.50	36.70	55.20	8.10	BELL		76.00	5.10	W207814	0.70	363823	834851	B	13620	09/01/88
										8.10	2.00		3.5	2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE	3.60	34.10	45.40	BELL	65.00	4.50	0.60	363824	835037	B	11620	09/01/88
								8.10	1.30		1.5	2804
PORTAL				BELL								
2.80	35.90	54.30	8.80	75.90	0.70	363825	834852	B	13530	09/01/88		
								7.50	2.00		5.0	2804
UNDERGROUND MINE	3.00	37.10	58.30	BELL	79.70	5.20	0.60	363837	834826	B	14200	09/01/88
								8.00	1.90		5.0	2804
SURFACE MINE				BELL								
2.80	28.50	38.80	32.70	54.00	0.80	363850	834907	B	9850	09/01/88		
								7.40	1.30		1.0	2804
UNDERGROUND MINE	3.00	30.60	45.40	BELL	62.20	4.30	1.20	363857	834854	B	11080	09/01/88
								6.90	1.40		4.0	2660
SURFACE MINE				BELL								
2.40	37.90	56.30	5.80	78.60	0.80	363947	834850	B	14020	09/01/88		
								7.70	1.80		4.5	2804
SURFACE MINE				BELL								
2.50	37.80	59.40	2.80	81.30	0.90	363948	834855	B	14520	09/01/88		
								7.90	1.70		3.5	2768
SURFACE MINE				BELL								
2.20	38.10	58.70	3.20	81.60	0.70	364114	833711	B	14750	09/01/88		
								6.80	2.20		4.5	2444
DRILL CORE				WHITLEY								
2.20	40.60	50.20	9.20	74.70	2.90	364114	841235	B	13470	09/01/88		
								6.20	1.80		4.5	2192
UNDERGROUND MINE				BELL								
2.20	35.80	45.90	18.30	66.30	2.70	364117	833436	B	12200	09/01/88		
								6.00	1.90		7.0	2372
UNDERGROUND MINE				BELL								
2.20	35.20	46.10	18.70	66.20	2.40	364117	833439	B	12110	09/01/88		
								5.90	1.90		6.5	2507
UNDERGROUND MINE				BELL								
2.20	32.90	49.90	17.20	69.50	1.10	364119	833654	B	12500	09/01/88		
								5.60	1.80		7.0	2777
DRILL CORE				WHITLEY								
2.10	40.40	47.80	11.80	72.10	2.60	364156	841100	B	13060	09/01/88		
								6.70	1.70		3.0	2570
SURFACE MINE				BELL								
2.40	38.50	57.60	3.90	81.10	0.70	364210	833422	B	14620	09/01/88		
								6.60	2.20		7.0	2759
UNDERGROUND MINE				WHITLEY								
2.30	30.60	45.60	23.80	63.30	0.80	364220	835701	B	11170	09/01/88		
								6.40	1.60		1.0	2606
SURFACE MINE				BELL								
2.10	38.60	61.40	2.00	83.30	0.70	364225	834520	B	14690	09/01/88		
								6.70	2.00		4.5	2399

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
SURFACE MINE	3.10	40.70	52.90	KNOX	6.40	77.80	W213937	0.70	364245	835333	B	13860	09/01/88
							5.30		7.80	2.00		4.0	2732
SURFACE MINE	7.30	39.80	57.30	WHITLEY	2.90	79.60	W213954	0.90	364245	840322	B	14030	09/01/88
							5.20		9.20	2.20		1.5	2327
SURFACE MINE	2.90	40.30	56.30	WHITLEY	3.40	79.60	W213953	2.20	364300	835737	B	14410	09/01/88
							5.40		7.20	2.20		4.5	2030
SURFACE MINE	3.30	37.30	50.40	WHITLEY	12.30	71.40	W213952	2.00	364304	835731	B	12670	09/01/88
							4.90		7.50	1.90		3.0	2030
UNDERGROUND MINE	6.40	38.60	59.80	KNOX	1.60	82.50	W213936	0.80	364310	835557	B	14620	09/01/88
							5.50		7.40	2.20		3.5	2264
SURFACE MINE	2.70	44.60	46.90	MCCREARY	8.50	73.40	W208217	4.30	364438	843634	B	13420	09/01/88
							5.30		7.10	1.40		5.0	2570
CONSTRUCTION SITE	2.00	39.40	57.30	BELL	3.30	81.30	W213023	1.60	364510	833845	B	14670	09/01/88
							5.40		5.90	2.50		8.0	2210
SURFACE MINE	3.80	34.50	55.10	BELL	10.40	74.30	W214779	0.70	364518	834547	B	13090	09/01/88
							4.70		8.10	1.80		1.5	2804
SURFACE MINE	2.00	37.70	55.80	BELL	6.50	78.80	W213022	2.00	364518	833229	B	14130	09/01/88
							5.30		5.50	1.90		7.5	2327
SURFACE MINE	4.60	38.70	52.40	BELL	8.90	74.70	W214780	1.00	364520	834545	B	13420	09/01/88
							5.00		8.60	1.60		1.0	2678
SURFACE MINE	3.60	38.70	57.60	BELL	3.70	81.90	W213944	0.90	364522	833228	B	14530	09/01/88
							5.30		6.20	2.00		6.5	2570
SURFACE MINE	1.60	35.90	52.80	BELL	11.30	73.20	W215419	3.40	364548	834317	B	13060	09/01/88
							4.80		5.60	1.70		3.5	2246
SURFACE MINE	2.40	34.70	54.30	BELL	11.00	71.90	W215420	2.70	364550	834323	B	13140	09/01/88
							4.90		7.70	1.80		3.5	2291
UNDERGROUND MINE	1.80	36.70	47.50	BELL	15.80	70.10	W213024	1.60	364606	833231	B	12590	09/01/88
							4.80		6.00	1.70		6.5	2723
UNDERGROUND MINE	2.40	37.30	59.00	BELL	3.70	80.70	W212782	0.90	364643	833843	B	14460	09/01/88
							5.20		7.60	1.90		4.0	2516
SURFACE MINE	2.20	38.90	57.80	BELL	3.30	81.20	W215439	0.70	364645	833731	B	14630	09/01/88
							5.40		7.10	2.30		5.0	2237

## Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
-----											
SURFACE MINE		BELL			W215408		364645	833922	B	13810	09/01/88
1.30	39.80	51.90	8.30	75.20	5.20	4.40	5.20	1.70		5.0	2111
-----											
SURFACE MINE		KNOX			W215398		364805	835621	B	14600	09/01/88
1.70	40.30	55.80	3.90	79.80	5.40	2.60	6.30	2.00		4.0	2012
-----											
SURFACE MINE		WHITLEY			W207985		364805	840333	B	14550	09/01/88
3.60	38.40	58.70	2.90	81.00	5.50	0.70	7.80	2.10		3.5	2201
-----											
UNDERGROUND MINE		HARLAN			W215429		364806	831212	B	13970	09/01/88
2.00	36.10	56.70	7.20	77.80	5.10	1.10	7.10	1.70		3.5	2552
-----											
SURFACE MINE		WHITLEY			W205325		364826	840517	B	14600	09/01/88
4.50	37.70	60.20	2.10	81.80	5.50	0.90	7.60	2.10		5.0	2417
-----											
SURFACE MINE		WHITLEY			W207984		364828	840523	B	14360	09/01/88
5.20	37.80	59.60	2.60	81.10	5.40	0.80	8.10	2.00		1.5	2048
-----											
UNDERGROUND MINE		HARLAN			W215431		364840	831312	B	12580	09/01/88
1.70	34.40	51.20	14.40	70.60	4.80	1.90	6.50	1.80		3.0	2552
-----											
SURFACE MINE		KNOX			W214263		364841	835234	B	14650	09/01/88
2.90	38.80	57.60	3.60	80.50	5.50	1.70	6.80	1.90		4.5	2120
-----											
PORTAL		HARLAN			W215430		364845	831221	B	14210	09/01/88
2.00	41.30	53.40	5.30	78.90	5.40	2.20	6.50	1.70		3.0	2156
-----											
SURFACE MINE		KNOX			W214264		364845	835239	B	14100	09/01/88
2.80	41.50	52.70	5.80	77.30	5.40	4.20	5.20	2.10		4.5	2300
-----											
SURFACE MINE		WAYNE			W212054		364859	843710	B	13400	09/01/88
2.40	41.70	49.30	9.00	73.90	5.30	3.20	7.10	1.50		5.5	2210
-----											
UNDERGROUND MINE		HARLAN			W215428		364934	831007	B	12600	09/01/88
2.60	34.30	52.10	13.60	71.30	4.70	1.00	7.80	1.60		2.5	2498
-----											
SURFACE MINE		KNOX			W213119		365005	835928	B	14560	09/01/88
2.80	39.50	57.00	3.50	79.80	5.40	1.90	7.50	1.90		3.5	2003
-----											
SURFACE MINE		MCCREARY			W214269		365005	842938	B	13800	09/01/88
5.80	35.30	58.80	5.90	78.00	5.10	1.00	8.20	1.80		4.0	2804
-----											
UNDERGROUND MINE		HARLAN			W215434		365006	831507	B	13450	09/01/88
2.90	34.60	56.90	8.50	76.30	4.80	1.40	7.40	1.60		2.5	2687
-----											
SURFACE MINE		MCCREARY			W214268		365006	842938	B	13250	09/01/88
4.50	38.00	52.60	9.40	74.00	5.10	1.70	8.00	1.80		5.0	2579

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	3.40	37.30	57.20	KNOX	5.50	78.60	W213120	5.30	0.80	365011	835942	B	14200	09/01/88
										7.90	1.90		3.5	2273
SURFACE MINE	3.90	37.80	60.50	WHITLEY	1.70	83.10	W214772	5.40	0.70	365012	840455	B	14840	09/01/88
										7.10	2.00		5.0	2417
SURFACE MINE	4.80	37.70	58.60	WHITLEY	3.70	81.00	W214775	5.30	1.00	365012	840500	B	14300	09/01/88
										7.00	2.00		5.5	2678
UNDERGROUND MINE	2.10	35.60	55.70	HARLAN	8.70	76.00	W215433	5.10	1.40	365015	831659	B	13600	09/01/88
										6.70	2.10		4.0	2723
UNDERGROUND MINE	2.30	31.60	54.90	HARLAN	13.50	73.00	W215432	4.60	0.70	365019	831706	B	12810	09/01/88
										6.50	1.70		3.5	2804
UNDERGROUND MINE	2.90	36.30	52.20	MCCREARY	11.50	71.60	W212055	4.90	2.00	365039	842632	B	12710	09/01/88
										8.10	1.90		3.5	2597
UNDERGROUND MINE	1.70	39.40	56.00	BELL	4.60	79.80	W215394	5.40	2.80	365049	833805	B	14500	09/01/88
										5.50	1.90		6.0	2138
UNDERGROUND MINE	1.50	39.30	59.00	BELL	1.70	83.60	W215393	5.70	0.90	365053	833809	B	15080	09/01/88
										6.10	2.00		4.5	2336
UNDERGROUND MINE	1.50	36.20	50.50	HARLAN	13.30	72.10	W211639	4.90	2.60	365123	831239	B	12900	09/01/88
										5.50	1.60		6.0	2489
UNDERGROUND MINE	1.80	33.70	51.00	HARLAN	15.30	71.00	W211638	4.80	0.60	365125	831239	B	12490	09/01/88
										6.70	1.60		2.0	2804
SURFACE MINE	9.10	34.70	59.70	WAYNE	5.60	78.60	W214257	4.60	1.30	365125	844214	B	13380	09/01/88
										8.60	1.30		2.0	2336
ROAD CUT	3.20	42.10	53.50	KNOX	4.40	79.80	W213010	5.40	2.60	365158	835246	B	14340	09/01/88
										6.00	1.80		4.0	2021
SURFACE MINE	2.20	39.80	56.80	BELL	3.40	81.30	W214791	5.60	1.00	365210	833727	B	14520	09/01/88
										6.80	1.90		4.5	2678
PROSPECT	4.00	40.50	57.00	HARLAN	2.50	80.10	W214793	5.40	0.80	365229	830521	B	14080	09/01/88
										9.50	1.70		2.0	2471
UNDERGROUND MINE	3.30	38.80	54.00	BELL	7.20	77.30	W215438	5.20	1.10	365233	833745	B	13970	09/01/88
										7.30	1.90		4.0	2570
UNDERGROUND MINE	2.00	36.20	55.60	HARLAN	8.20	77.20	W215407	5.10	0.70	365238	831153	B	13790	09/01/88
										7.30	1.50		4.0	2759



## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	1.80	38.20	55.00	HARLAN	6.80	77.30	5.30	W215403	1.40	365243	832704	B	13950	09/01/88
										7.70	1.50		5.0	2696
SURFACE MINE	3.50	36.60	55.50	BELL	7.90	76.90	5.10	W215552	2.20	365247	833517	B	13680	09/01/88
										6.20	1.70		3.5	2201
UNDERGROUND MINE	1.70	35.50	54.50	HARLAN	10.00	75.70	4.90	W215406	0.90	365248	831112	B	13540	09/01/88
										6.90	1.60		6.0	2804
SURFACE MINE	2.40	37.30	53.90	BELL	8.80	75.50	5.00	W214788	1.60	365255	833801	B	13420	09/01/88
										7.30	1.80		5.5	2624
MINE PORTAL	2.00	38.90	54.00	HARLAN	7.10	77.30	5.40	W215427	2.60	365305	831202	B	13980	09/01/88
										5.90	1.70		4.0	2084
SURFACE MINE	3.80	38.50	55.10	MCCREARY	6.40	76.00	5.20	W208202	2.40	365308	842539	B	13770	09/01/88
										8.10	1.90		5.0	2084
SURFACE MINE	2.10	35.90	52.90	BELL	11.20	73.50	5.10	W214789	0.70	365309	833750	B	13140	09/01/88
										7.80	1.70		5.0	2804
UNDERGROUND MINE	3.90	37.40	53.80	HARLAN	8.80	75.70	5.00	W214792	0.90	365311	830502	B	13340	09/01/88
										8.10	1.50		3.0	2723
UNDERGROUND MINE	1.80	34.70	55.00	HARLAN	10.30	74.70	4.90	W215426	0.70	365311	830526	B	13490	09/01/88
										7.90	1.50		4.0	2660
SURFACE MINE	2.40	38.90	57.60	BELL	3.50	80.60	5.50	W214783	1.20	365311	833805	B	14400	09/01/88
										7.40	1.80		6.0	2138
SURFACE MINE	2.10	38.10	50.10	BELL	11.80	71.70	4.90	W214782	3.60	365312	833802	B	13000	09/01/88
										6.50	1.50		4.0	2183
SURFACE MINE	3.20	35.90	56.80	MCCREARY	7.30	76.20	5.00	W214781	1.60	365319	842423	B	13570	09/01/88
										8.10	1.80		5.0	2588
UNDERGROUND MINE	1.80	38.00	57.10	HARLAN	4.90	80.30	5.40	W215405	1.10	365321	830654	B	14320	09/01/88
										6.60	1.70		6.0	2804
ROAD CUT	3.20	39.70	57.90	KNOX	2.40	82.00	5.40	W212502	0.80	365333	835314	B	14680	09/01/88
										7.60	1.80		3.5	2318
SURFACE MINE	3.30	37.80	60.90	KNOX	1.30	83.30	5.50	W213118	0.60	365344	840215	B	14870	09/01/88
										7.40	1.90		3.5	2417
SURFACE MINE	5.70	37.70	57.80	BELL	4.50	80.50	5.30	W215550	0.90	365350	833336	B	14400	09/01/88
										7.20	1.60		5.0	2678

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.10	35.80	53.20	BELL	11.00	73.30	W215545	1.00	365354	833349	B	12990	09/01/88
							4.70		8.50	1.50		1.0	2804
SURFACE MINE	3.40	38.60	48.60	BELL	12.80	71.90	W215551	2.30	365401	833347	B	12940	09/01/88
							5.10		6.40	1.50		5.0	2516
SURFACE MINE	5.20	37.40	60.40	KNOX	2.20	81.90	W214773	0.60	365408	840333	B	14540	09/01/88
							5.30		8.00	2.00		3.5	2399
SURFACE MINE	3.10	37.80	60.50	KNOX	1.70	82.10	W205329	0.80	365414	835227	B	14590	09/01/88
							5.30		8.00	2.10		4.0	2210
SURFACE MINE	3.60	38.70	52.60	KNOX	8.70	73.50	W214778	5.00	365419	835518	B	13390	09/01/88
							4.80		6.10	1.90		4.0	2219
SURFACE MINE	3.30	39.80	55.20	KNOX	5.00	79.50	W205331	0.90	365424	835226	B	14330	09/01/88
							5.80		6.80	2.00		4.5	2570
SURFACE MINE	2.80	35.00	49.20	BELL	15.80	69.60	W215435	1.70	365438	833050	B	12430	09/01/88
							4.80		6.60	1.50		4.0	2759
ROAD CUT	3.10	40.50	47.00	KNOX	12.50	71.50	W213009	3.60	365457	835522	B	12920	09/01/88
							5.00		5.70	1.70		4.0	2093
SURFACE MINE	2.60	38.60	48.50	HARLAN	12.90	70.60	W215562	3.60	365521	832015	B	12860	09/01/88
							5.00		6.60	1.30		4.0	2219
SURFACE MINE	3.30	35.90	49.20	HARLAN	14.90	69.10	W215560	3.10	365522	832012	B	12450	09/01/88
							4.70		6.90	1.30		4.0	2561
SURFACE MINE	2.30	41.90	49.80	HARLAN	8.30	74.70	W215563	3.80	365522	832015	B	13620	09/01/88
							5.30		6.50	1.40		4.0	2084
UNDERGROUND MINE	2.10	39.20	53.40	BELL	7.40	77.10	W215437	2.40	365530	833216	B	14090	09/01/88
							5.30		6.00	1.80		5.5	2219
SURFACE MINE	2.20	37.60	52.50	KNOX	9.90	74.80	W214790	1.70	365549	833530	B	13330	09/01/88
							5.00		7.00	1.60		4.5	2507
SURFACE MINE	2.60	38.00	49.40	LESLIE	12.60	71.20	W214262	3.10	365718	833001	B	12890	09/01/88
							4.90		6.60	1.60		5.5	2273
SURFACE MINE	4.40	35.60	53.60	LESLIE	10.80	74.10	W213017	0.60	365759	831739	B	13110	09/01/88
							4.60		8.40	1.50		1.0	2759
SURFACE MINE	4.40	41.30	52.90	LESLIE	5.80	78.30	W213018	1.10	365800	831741	B	13900	09/01/88
							5.30		7.90	1.60		2.0	2228

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbón	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
SURFACE MINE	4.90	32.30	55.50	LESLIE	12.20	73.30	4.60	0.50	365804	831713	B	12780	09/01/88
									8.00	1.40		1.0	2804
SURFACE MINE	3.20	35.20	42.90	LESLIE	21.90	63.20	4.50	1.70	365804	831746	B	11290	09/01/88
									7.30	1.40		1.5	2678
SURFACE MINE	3.00	36.90	52.60	LESLIE	10.50	73.20	5.00	1.80	365816	831745	B	13160	09/01/88
									8.00	1.50		3.5	2624
SURFACE MINE	3.40	38.20	46.30	LESLIE	15.50	68.20	4.70	2.20	365817	831759	B	12180	09/01/88
									8.10	1.30		5.5	2498
UNDERGROUND MINE	2.40	37.40	51.70	LESLIE	10.90	73.90	5.10	1.60	365846	831737	B	13190	09/01/88
									6.60	1.90		5.5	2750
SURFACE MINE	2.50	38.00	57.10	LAUREL	4.90	79.40	5.30	1.50	365932	840309	B	14260	09/01/88
									6.80	2.10		5.0	2480
DRILL CORE	2.90	39.30	55.50	KNOX	5.20	78.60	5.40	2.00	365958	835047	B	14120	09/01/88
									6.80	2.00		4.5	2129
SURFACE MINE	8.10	30.30	55.80	LESLIE	13.90	69.30	4.20	0.40	370039	831618	B	11930	09/01/88
									10.90	1.30		0.5	2804
SURFACE MINE	1.70	37.40	54.00	LAUREL	8.60	75.80	5.10	3.80	370044	840051	B	13880	09/01/88
									5.10	1.60		6.0	2084
SURFACE MINE	4.20	33.60	60.10	LESLIE	6.30	79.00	5.00	0.50	370047	831557	B	13840	09/01/88
									7.70	1.50		1.5	2516
UNDERGROUND MINE	2.20	35.40	53.50	CLAY	11.10	73.70	4.80	1.50	370053	833116	B	13170	09/01/88
									7.30	1.60		6.5	2696
SURFACE MINE	3.30	39.40	51.90	LAUREL	8.70	76.00	5.10	1.70	370118	835807	B	13580	09/01/88
									6.60	1.90		4.0	2228
	1.20	39.00	54.70	LESLIE	6.30	77.00	5.40	4.00	370142	832134	B	13970	09/01/88
									6.40	0.90		5.0	2174
SURFACE MINE	2.60	38.80	56.20	CLAY	5.00	80.60	5.30	0.60	370153	833846	B	14300	09/01/88
									6.80	1.70		5.0	2804
SURFACE MINE	2.80	37.30	49.80	CLAY	12.90	72.10	5.00	1.70	370154	833849	B	12870	09/01/88
									6.70	1.60		5.5	2372
SURFACE MINE	2.60	35.70	43.50	CLAY	20.70	65.00	4.50	1.80	370156	833844	B	11650	09/01/88
									6.60	1.40		2.0	2687

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.40	32.50	55.00	CLAY	12.50	73.40	4.80	0.90	370158	833902	B	13000	09/01/88
									6.90	1.50		3.5	2804
SURFACE MINE	2.40	39.60	49.70	CLAY	10.70	74.30	5.00	1.30	370158	833904	B	13220	09/01/88
									6.90	1.80		5.5	2804
SURFACE MINE	2.80	35.70	56.90	CLAY	7.40	78.50	5.10	0.70	370227	833557	B	13990	09/01/88
									6.70	1.60		3.5	2804
SURFACE MINE	2.60	37.70	55.10	CLAY	7.20	77.30	5.20	1.00	370245	833649	B	13850	09/01/88
									7.50	1.80		5.0	2804
SURFACE MINE	2.70	33.60	52.90	LETCHER	13.50	73.30	4.90	1.00	370327	824420	B	13120	09/01/88
									5.80	1.50		7.0	2804
SURFACE MINE	2.30	33.10	51.50	LETCHER	15.40	71.30	4.80	1.40	370328	824420	B	12740	09/01/88
									5.60	1.50		7.5	2759
SURFACE MINE	2.60	33.80	54.40	LETCHER	11.80	74.60	4.90	1.60	370330	824425	B	13350	09/01/88
									5.50	1.60		7.5	2741
UNDERGROUND MINE	2.40	34.40	58.00	LETCHER	7.60	79.00	5.00	1.30	370331	824338	B	14090	09/01/88
									5.70	1.40		7.5	2650
	1.90	35.00	48.90	LESLIE	16.10	68.30	5.00	1.10	370334	832017	B	12250	09/01/88
									8.30	1.20		1.0	2759
	2.00	34.80	51.40	LESLIE	13.80	70.80	5.00	2.20	370335	832113	B	12610	09/01/88
									7.00	1.20		1.5	2912
UNDERGROUND MINE	2.10	36.40	56.20	PERRY	7.40	78.30	5.20	0.80	370615	830623	B	13880	09/01/88
									6.50	1.80		4.5	2759
DRILL CORE	2.70	37.20	56.10	LESLIE	6.70	77.90	5.30	0.60	370729	832043	B	13920	09/01/88
									7.90	1.60		3.0	2804
SURFACE MINE	5.40	40.60	53.00	LAUREL	6.40	77.10	5.20	1.40	370734	841428	B	13780	09/01/88
									8.30	1.60		4.0	2228
SURFACE MINE	4.30	39.20	56.20	LAUREL	4.60	79.10	5.50	1.50	370752	840901	B	14130	09/01/88
									7.10	2.20		5.0	2237
ROAD CUT	3.00	38.60	53.90	CLAY	7.50	75.20	5.20	1.90	370821	834608	B	13750	09/01/88
									8.40	1.80		2.5	2192
SURFACE MINE	3.80	34.70	51.70	LESLIE	13.60	71.30	4.70	1.30	370837	831548	B	12610	09/01/88
									7.70	1.40		2.5	2768

## Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Rank	Free Swell	Hemi Temp				
-----																
SURFACE MINE			LAUREL		W212501		370841	841001	B		14480	09/01/88				
3.60	41.00	57.20	1.80	81.40	5.50	1.20	8.00	2.10			5.0	2273				
-----																
SURFACE MINE			LAUREL		W207471		370844	840120	B		13780	09/01/88				
3.20	41.30	51.30	7.40	75.20	5.30	2.70	7.70	1.70			4.0	2237				
-----																
SURFACE MINE			LAUREL		W212500		370845	840956	B		13360	09/01/88				
2.80	41.40	49.70	8.90	73.40	4.90	4.00	7.10	1.70			4.0	2120				
-----																
SURFACE MINE			PERRY		W207898		370853	830827	B		12180	09/01/88				
2.70	36.50	46.70	16.80	66.60	4.60	5.50	5.20	1.30			5.0	2147				
-----																
SURFACE MINE			LAUREL		W207469		370901	840117	B		13890	09/01/88				
3.50	40.60	52.90	6.50	75.10	5.40	4.40	6.70	1.90			4.0	2156				
-----																
ROAD CUT			PULASKI		W210347		370921	841908	B		13260	09/01/88				
3.30	38.90	52.90	8.20	73.30	5.00	5.00	7.00	1.50			2.5	2111				
-----																
SURFACE MINE			LETCHER		W209667		370923	825306	B		13480	09/01/88				
2.20	36.10	54.20	9.70	74.80	5.40	0.70	7.80	1.60			5.5	2804				
-----																
ROAD CUT			PULASKI		W210346		370935	842025	B		13570	09/01/88				
3.20	39.20	53.50	7.30	74.00	5.30	2.40	9.20	1.80			4.5	2048				
-----																
SURFACE MINE			LETCHER		W209674		371010	825735	B		12530	09/01/88				
2.40	32.90	51.60	15.50	71.10	4.70	0.70	6.60	1.40			1.5	2804				
-----																
SURFACE MINE			LETCHER		W209671		371015	825815	B		13320	09/01/88				
2.40	32.60	57.70	9.70	75.20	4.80	1.00	7.80	1.50			3.0	2741				
-----																
SURFACE MINE			LETCHER		W209673		371017	825815	B		12670	09/01/88				
2.10	35.20	50.20	14.60	70.10	5.00	0.80	8.00	1.50			4.0	2804				
-----																
PROSPECT PIT			CLAY		W205327		371026	834223	B		13060	09/01/88				
2.80	40.10	47.90	12.00	71.90	5.40	3.00	5.80	1.90			4.5	2318				
-----																
SURFACE MINE			CLAY		W214774		371039	835148	B		13460	09/01/88				
2.80	36.10	54.10	9.80	75.40	5.00	0.70	7.30	1.80			5.0	2804				
-----																
SURFACE MINE			LAUREL		W213941		371039	841156	B		14260	09/01/88				
5.30	38.90	56.80	4.30	79.90	5.30	2.10	6.70	1.70			3.5	2039				
-----																
SURFACE MINE			CLAY		W210294		371048	834709	B		13920	09/01/88				
2.50	36.50	56.80	6.70	78.00	5.30	0.70	7.50	1.80			4.5	2804				
-----																
UNDERGROUND MINE			LETCHER		W208196		371053	824747	B		14210	09/01/88				
2.60	39.90	54.60	5.50	78.80	5.40	2.00	6.60	1.70			5.0	2624				

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE	3.30	39.80	50.30	LAUREL	70.90	5.10	W207468	371109	840416	B	13240	09/01/88
								8.00	1.70		3.0	2057
UNDERGROUND MINE	2.20	40.20	46.60	LESLIE	70.80	5.00	W213026	371137	832231	B	12780	09/01/88
								6.30	1.50		4.0	2462
SURFACE MINE	3.40	35.80	58.50	CLAY	79.10	5.10	W205337	371146	834442	B	14200	09/01/88
								7.70	1.90		5.5	2804
SURFACE MINE	3.80	38.80	55.00	LAUREL	77.50	5.70	W207464	371209	840216	B	13980	09/01/88
								7.10	1.90		3.5	2291
SURFACE MINE	5.80	36.20	59.00	LAUREL	76.30	4.70	W207466	371210	840020	B	13710	09/01/88
								11.60	1.90		1.0	2237
SURFACE MINE	2.30	38.60	55.50	LETCHER	78.60	5.30	W209668	371233	825053	B	14060	09/01/88
								7.70	1.70		5.0	2804
SURFACE MINE	10.60	36.80	59.30	LAUREL	73.00	4.60	W207465	371234	840254	B	12610	09/01/88
								15.90	1.90		0.0	2336
SURFACE MINE	3.10	36.30	54.20	LETCHER	74.60	5.10	W209669	371235	824726	B	13380	09/01/88
								8.20	1.80		4.5	2804
SURFACE MINE	3.90	38.30	58.20	LAUREL	76.70	5.40	W207463	371244	840154	B	14430	09/01/88
								11.60	2.00		5.0	2363
SURFACE MINE	2.20	38.70	53.10	PERRY	75.80	5.10	W212592	371257	831538	B	13510	09/01/88
								8.10	1.60		3.0	2570
UNDERGROUND MINE	2.00	32.70	47.60	LETCHER	66.40	4.50	W210261	371310	824617	B	11630	09/01/88
								7.30	1.40		3.5	2804
SURFACE MINE	5.20	40.10	55.30	CLAY	79.40	5.40	W214260	371312	835557	B	14270	09/01/88
								7.70	2.10		3.5	2804
SURFACE MINE	4.20	37.40	57.50	LAUREL	78.00	5.40	W207467	371318	840456	B	14060	09/01/88
								7.60	1.90		5.5	2318
UNDERGROUND MINE	2.30	35.90	56.70	PERRY	77.00	4.90	W212593	371321	831607	B	13670	09/01/88
								8.00	1.70		2.0	2804
UNDERGROUND MINE	4.10	38.90	56.80	CLAY	80.50	5.20	W205338	371330	834332	B	14570	09/01/88
								7.40	2.00		5.5	2804
SURFACE MINE	3.80	37.20	55.00	PERRY	76.60	5.30	W207447	371331	831126	B	13630	09/01/88
								8.00	1.60		2.0	2777

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fixed Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ROAD CUT	8.70	33.20	48.50	PERRY	18.30	82.70	W207456	1.00	371337	831114	B	10790	09/01/88
							4.20		12.40	1.40		0.0	2102
ROAD CUT	4.90	36.50	51.90	LAUREL	11.80	71.70	W207462	1.20	371344	841247	B	12970	09/01/88
							5.10		8.80	1.60		1.5	2804
SURFACE MINE	3.80	34.80	51.00	PERRY	14.20	70.00	W212591	0.60	371355	831721	B	12290	09/01/88
							4.50		9.30	1.40		1.0	2804
ROAD CUT	2.70	38.20	43.90	PERRY	17.90	65.60	W207455	3.70	371359	831058	B	12020	09/01/88
							4.90		6.60	1.30		5.0	2120
SURFACE MINE	3.70	31.30	56.90	PERRY	11.80	74.70	W207815	0.60	371413	831117	B	12970	09/01/88
							4.60		7.00	1.30		1.0	2804
ROAD CUT	3.10	34.30	51.50	PERRY	14.20	70.70	W207454	0.50	371431	831104	B	12690	09/01/88
							4.70		8.40	1.50		3.0	2804
UNDERGROUND MINE	2.30	36.60	60.00	PIKE	3.40	81.90	W209851	0.60	371512	823104	B	14730	09/01/88
							5.40		7.20	1.50		6.0	2471
ROAD CUT	2.70	37.70	54.90	PERRY	7.40	76.80	W210313	0.90	371541	831206	B	13710	09/01/88
							5.20		8.10	1.60		3.5	2804
UNDERGROUND MINE	1.90	30.30	52.70	PIKE	17.00	69.30	W210154	0.70	371518	823405	B	12210	09/01/88
							4.60		7.00	1.40		3.0	2804
UNDERGROUND MINE	1.80	33.60	49.60	PIKE	16.80	69.00	W212595	1.00	371642	823031	B	12460	09/01/88
							4.70		7.00	1.50		5.5	2750
ROAD CUT	3.30	36.10	54.50	PERRY	9.40	75.40	W211619	0.60	371708	831136	B	13370	09/01/88
							4.90		8.10	1.60		1.5	2804
UNDERGROUND MINE	1.70	34.70	51.40	PIKE	13.90	72.60	W212594	0.80	371714	823147	B	12940	09/01/88
							4.90		6.30	1.50		4.0	2804
SURFACE MINE	4.30	40.30	56.30	JACKSON	3.40	81.10	W213933	0.90	371718	840416	B	14560	09/01/88
							5.50		7.30	1.80		5.0	2507
ROAD CUT	2.10	34.60	63.30	PIKE	2.10	83.30	W210161	0.70	371725	823302	B	14800	09/01/88
							5.40		6.90	1.60		5.0	2561
ROAD CUT	1.80	36.70	58.00	PIKE	5.30	80.20	W210162	0.90	371727	823303	B	14330	09/01/88
							5.40		6.70	1.50		7.0	2804
ROAD CUT	2.00	34.10	60.40	PIKE	5.50	80.10	W210163	0.80	371732	823306	B	14110	09/01/88
							5.10		7.10	1.40		5.0	2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE	1.90	33.60	53.20	FLOYD	13.20	71.40	4.90	0.70	371733	824216	B	12930	09/01/88
									8.20	1.60		4.0	2741
PROSPECT PIT	4.10	33.70	46.80	OWSLEY	19.50	65.30	4.80	1.90	371735	833309	B	11660	09/01/88
									7.00	1.50		2.0	2804
SURFACE MINE	1.50	36.10	58.60	PIKE	5.30	80.10	5.10	0.90	371739	822513	B	14310	09/01/88
									7.00	1.60		7.0	2804
SURFACE MINE	1.70	32.20	55.10	PIKE	12.70	74.40	4.60	0.80	371740	822519	B	13100	09/01/88
									6.10	1.40		7.5	2804
DRILL CORE, HOLE NO 30	1.80	42.60	43.90	PERRY	13.50	70.30	5.30	2.80	371742	831218	B	12830	09/01/88
									6.50	1.60		4.0	2651
SURFACE MINE	6.70	35.90	61.70	LAUREL	2.40	82.40	5.10	0.70	371747	840702	B	14640	09/01/88
									7.60	1.80		3.0	2651
UNDERGROUND MINE	1.80	30.00	59.40	PIKE	10.60	76.20	4.70	0.40	371759	822548	B	13480	09/01/88
									6.70	1.40		3.5	2660
ROAD CUT	3.10	35.70	55.30	PERRY	9.00	76.10	5.00	0.60	371808	831133	B	13460	09/01/88
									7.60	1.70		3.0	2804
UNDERGROUND MINE	4.60	37.10	54.70	PERRY	8.20	76.30	5.10	0.80	371813	831228	B	13570	09/01/88
									7.80	1.80		3.0	2804
UNDERGROUND MINE	1.50	34.10	59.80	PIKE	6.10	80.40	5.10	0.70	371815	822535	B	14250	09/01/88
									6.30	1.40		7.5	2804
UNDERGROUND MINE	1.20	27.90	49.00	PIKE	23.10	64.20	4.20	2.50	371842	821842	B	11720	09/01/88
									4.70	1.30		5.0	2606
DRILL CORE, HOLE NO 30	1.40	43.60	52.10	PERRY	4.30	79.00	5.60	2.70	371842	831218	B	14280	09/01/88
									6.90	1.50		3.5	2039
SURFACE MINE	2.90	37.60	51.50	KNOTT	10.90	73.30	4.90	1.50	371846	830113	B	13150	09/01/88
									7.80	1.60		3.5	2552
SURFACE MINE	6.10	37.70	55.40	PERRY	6.90	76.80	5.30	0.70	371851	831623	B	13630	09/01/88
									8.60	1.70		3.0	2804
UNDERGROUND MINE	1.50	26.20	48.10	PIKE	25.70	63.60	4.10	0.70	371859	821805	B	11370	09/01/88
									4.50	1.40		6.0	2804
ROAD CUT	3.60	34.30	48.40	PERRY	17.30	65.50	4.60	3.60	371911	831004	B	12030	09/01/88
									7.40	1.60		4.5	2408



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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
SURFACE MINE				KNOTT									
4.40	36.90	52.20	10.90			73.30	5.20	0.60	371920	830304	B	13110	09/01/88
									8.30	1.70		2.5	2804
ROAD CUT				PERRY									
5.10	35.60	55.20	9.20			74.60	5.10	0.60	371927	830939	B	13380	09/01/88
									8.80	1.70		2.0	2804
ROAD CUT				PERRY									
4.00	38.50	53.30	10.20			74.00	5.00	0.70	371953	830937	B	13120	09/01/88
									8.40	1.70		1.5	2804
ROAD CUT				PERRY									
3.30	45.10	48.70	6.20			77.00	W208059	2.00	372008	830917	B	14000	09/01/88
							5.60		7.60	1.60		4.5	2102
UNDERGROUND MINE				PERRY									
6.00	38.10	52.20	9.70			73.90	W205320	0.50	372020	832313	B	12870	09/01/88
							5.10		8.90	1.90		1.0	2651
ROAD CUT				KNOTT									
2.10	33.70	50.50	15.80			69.60	W208432	1.20	372028	825902	B	12510	09/01/88
							4.80		7.20	1.40		4.5	2804
ROAD CUT				KNOTT									
2.00	40.20	51.90	7.90			75.80	W208430	0.60	372037	825905	B	13860	09/01/88
							5.50		7.50	1.70		5.5	2804
UNDERGROUND MINE				KNOTT									
1.80	37.80	51.60	10.60			75.30	W210266	0.70	372044	824708	B	13480	09/01/88
							5.30		8.70	1.40		4.0	2714
SURFACE MINE				PERRY									
4.00	33.70	46.60	19.70			66.00	W205322	0.80	372051	830856	B	11680	09/01/88
							4.60		7.50	1.60		1.0	2804
PORTAL				FLOYD									
3.40	34.40	56.10	9.50			75.10	W210319	0.80	372052	824302	B	13190	09/01/88
							4.90		8.20	1.50		1.5	2651
UNDERGROUND MINE				PIKE									
2.20	37.90	56.10	6.00			79.50	W209852	0.70	372104	823221	B	14320	08/01/88
							5.40		6.90	1.50		6.5	2597
SURFACE MINE				JACKSON									
4.70	38.00	59.80	2.20			82.10	W213932	0.80	372106	835535	B	14570	09/01/88
							5.40		7.70	1.80		4.0	2264
DRILL CORE, HOLE NO 40				PERRY									
2.10	43.90	50.10	6.00			77.00	W214785	3.00	372107	832022	B	13960	08/01/88
							5.50		6.70	1.80		4.0	2102
SURFACE MINE				PERRY									
5.30	33.90	52.80	13.30			71.30	W207986	0.70	372128	831733	B	12740	09/01/88
							4.70		8.50	1.50		1.5	2804
SURFACE MINE				PERRY									
6.20	36.00	52.90	11.10			72.10	W207987	0.70	372128	831739	B	12810	09/01/88
							4.80		9.70	1.50		1.0	2372
ROAD CUT				KNOTT									
1.80	35.40	45.00	19.60			66.10	W208428	1.00	372129	825901	B	11820	09/01/88
							4.60		7.30	1.40		3.5	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ROAD CUT				KNOTT			W208095		372131	825857	B	12700	09/01/88
3.20	37.50	48.80	13.70			71.10	5.10	1.40	7.00	1.70		4.5	2642
ROAD CUT				KNOTT			W208205		372131	830145	B	10490	09/01/88
2.40	33.20	39.20	27.60			57.40	4.30	3.50	5.90	1.30		4.0	2651
ROAD CUT				KNOTT			W208429		372138	825929	B	13250	09/01/88
3.00	36.70	52.70	10.60			73.90	5.00	1.90	7.10	1.50		5.5	2516
SURFACE MINE				PERRY			W207991		372143	831721	B	11530	09/01/88
6.00	33.20	47.30	19.50			64.90	4.50	0.60	9.10	1.40		1.0	2804
SURFACE MINE				PERRY			W207989		372143	831724	B	14280	09/01/88
5.30	39.00	58.10	2.90			79.80	5.40	1.10	9.00	1.80		4.0	2282
SURFACE MINE				OWSLEY			W205324		372146	834415	B	13610	09/01/88
4.30	37.40	55.40	7.20			76.50	5.50	0.80	8.10	1.90		3.5	2804
ROAD CUT				KNOTT			W208096		372153	825830	B	12050	09/01/88
2.70	40.00	42.20	17.80			65.90	4.90	3.30	6.60	1.50		4.5	2291
ROAD CUT				KNOTT			W208066		372158	830624	B	9980	09/01/88
2.20	30.70	38.60	30.70			55.00	4.00	3.40	5.80	1.10		4.5	2723
SURFACE MINE				BREATHITT			W205321		372201	832908	B	14130	09/01/88
4.40	39.60	56.70	3.70			79.80	5.70	0.70	8.10	2.00		4.5	2804
ROAD CUT				KNOTT			W208205		372213	830354	B	10610	09/01/88
1.90	31.70	41.40	26.90			59.40	4.20	1.90	6.30	1.30		4.0	2777
ROAD CUT				KNOTT			W208098		372219	825818	B	8490	09/01/88
1.60	27.20	33.00	39.80			47.50	3.50	3.00	5.30	0.90		1.0	2732
UNDERGROUND MINE				FLOYD			W210317		372245	823948	B	13370	09/01/88
2.20	34.10	56.10	9.80			75.80	4.90	0.60	7.50	1.40		4.5	2804
ROAD CUT				PIKE			W210164		372309	823325	B	13660	09/01/88
1.90	36.60	54.20	9.20			76.10	5.30	1.70	5.90	1.80		7.0	2309
UNDERGROUND MINE				KNOTT			W210265		372328	824559	B	13740	09/01/88
2.70	35.70	56.90	7.40			77.80	5.20	0.90	7.30	1.40		3.5	2552
SURFACE MINE				JACKSON			W207869		372334	835705	B	14660	09/01/88
6.00	38.80	58.90	2.30			81.30	5.50	0.60	8.50	1.80		3.5	2444
DRILL CORE, HOLE NO 50				KNOTT			W215672		372344	830650	B	11970	09/01/88
2.90	34.90	46.40	18.70			67.20	4.60	1.10	6.80	1.60		3.5	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				PERRY									
2.00	38.50	48.60	12.90			70.80	4.90	2.40	372349	830934	B	12640	09/01/88
									7.50	1.50		4.0	2777
UNDERGROUND MINE				FLOYD									
2.20	37.90	53.50	8.60			75.10	5.10	3.30	372435	824340	B	13460	09/01/88
									6.30	1.60		5.5	2300
SURFACE MINE				KNOTT									
2.70	34.30	51.00	14.70			70.70	4.60	0.80	372440	830620	B	12440	09/01/88
									7.60	1.60		1.5	2804
SURFACE MINE				ROCKCASTLE									
10.50	36.20	56.80	7.00			76.70	4.80	0.50	372443	841233	B	13170	09/01/88
									9.50	1.50		1.5	2759
SURFACE MINE				OWSLEY									
2.50	36.30	52.30	11.40			72.60	5.00	2.00	372452	833646	B	13020	09/01/88
									7.10	1.90		4.5	2732
SURFACE MINE				OWSLEY									
2.30	41.20	52.80	6.00			76.20	5.30	3.30	372454	833636	B	14030	09/01/88
									7.30	1.90		4.0	2183
SURFACE MINE				PIKE									
1.80	38.20	57.70	4.10			81.30	5.4	0.50	372455	823210	B	14460	09/01/88
									7.10	1.60		4.5	2552
SURFACE MINE				OWSLEY									
1.90	38.70	51.70	9.60			74.60	5.10	2.50	372455	833642	B	13430	09/01/88
									6.40	1.80		4.0	2183
				BREATHITT									
2.50	39.30	55.40	5.30			77.90	5.60	1.30	372458	833152	B	14030	09/01/88
									8.20	1.70		3.0	2516
PROSPECT				OWSLEY									
4.80	35.30	55.00	9.70			72.50	5.00	1.10	372502	834256	B	12840	09/01/88
									9.60	2.10		1.0	2201
				BREATHITT									
2.20	40.50	53.80	5.70			77.00	5.60	3.20	372512	833646	B	14070	09/01/88
									7.30	1.20		4.0	2066
ROAD CUT				KNOTT									
3.10	30.70	38.80	30.50			55.90	4.10	0.80	372523	825558	B	9900	09/01/88
									7.50	1.20		1.5	2804
SURFACE MINE				PIKE									
2.00	41.30	50.90	7.80			76.60	5.30	2.60	372638	823432	B	13800	09/01/88
									5.90	1.80		4.0	2183
ROAD CUT				KNOTT									
3.00	33.30	41.50	25.20			60.80	4.30	1.40	372656	825414	B	10900	09/01/88
									6.90	1.40		5.0	2669
PROSPECT				BREATHITT									
1.80	37.00	50.10	12.90			70.60	4.90	3.20	372704	833258	B	12830	09/01/88
									6.60	1.80		3.5	2048
ROAD CUT				KNOTT									
3.80	34.30	50.10	15.60			67.70	4.70	0.70	372706	825356	B	11890	09/01/88
									9.50	1.80		1.0	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
ROAD CUT	2.40	38.70	49.00	KNOTT	12.30	71.30	W209501	3.20	372707	825156	B	12880	09/01/88
							5.20	3.20	6.20	1.80		4.5	2192
SURFACE MINE	2.20	32.20	44.90	PIKE	22.90	53.30	W210158	1.10	372711	822907	B	11370	09/01/88
							4.50	1.10	6.80	1.40		2.0	2597
SURFACE MINE	2.00	38.70	57.90	PIKE	3.40	81.10	W210157	1.30	372712	822906	B	14470	09/01/88
							5.40	1.30	7.10	1.70		5.0	2237
SURFACE MINE	1.50	42.50	48.30	PIKE	9.10	73.20	W210156	5.20	372715	822906	B	13550	09/01/88
							5.40	5.20	5.80	1.50		3.0	2093
SURFACE MINE	2.20	37.50	58.20	PIKE	4.30	80.50	W210155	0.80	372721	822848	B	14380	09/01/88
							5.40	0.80	7.30	1.70		5.0	2804
SURFACE MINE	3.30	35.70	58.30	FLOYD	6.00	78.50	W211692	0.60	372722	823522	B	13730	09/01/88
							4.90	0.60	8.30	1.70		1.5	2804
SURFACE MINE	2.50	42.00	48.40	BREATHITT	9.60	74.60	W211610	0.80	372750	831113	B	13510	09/01/88
							5.50	0.80	7.80	1.70		1.5	2804
	2.30	36.30	49.60	OWSLEY	14.10	70.30	W189756	1.40	372758	833252	B	12520	09/01/88
							5.10	1.40	7.80	1.30		3.0	2912
SURFACE MINE	3.00	38.00	56.80	OWSLEY	5.20	78.10	W209507	1.80	372807	833906	B	14140	09/01/88
							5.30	1.80	7.30	2.30		4.0	2842
ROAD CUT	4.20	38.60	56.50	FLOYD	4.90	79.10	W209101	0.70	372813	825105	B	14170	09/01/88
							5.40	0.70	8.10	1.80		5.0	2381
SURFACE MINE	2.70	34.60	57.90	PIKE	7.50	77.50	W212053	1.10	372821	820703	B	13590	09/01/88
							4.90	1.10	7.40	1.60		2.5	2444
ROAD CUT	2.50	42.40	48.20	FLOYD	9.40	75.20	W208100	0.70	372825	825058	B	13680	09/01/88
							5.50	0.70	7.60	1.60		1.5	2777
SURFACE MINE	5.70	39.40	56.20	PIKE	4.40	78.70	W212055	0.60	372832	820702	B	13570	09/01/88
							4.80	0.60	10.00	1.50		2.0	2246
SURFACE MINE	1.50	31.60	53.50	PIKE	14.90	72.40	W212056	1.00	372838	820716	B	12840	09/01/88
							4.50	1.00	5.80	1.40		6.0	2804
ROAD CUT	2.10	42.20	52.10	FLOYD	5.70	76.80	W209504	3.60	372851	825011	B	14060	09/01/88
							5.50	3.60	6.70	1.70		3.5	1994
SURFACE MINE	3.20	37.20	57.80	KNOTT	5.00	78.50	W210259	0.60	372855	830245	B	13750	09/01/88
							4.80	0.60	9.60	1.50		1.5	2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	3.50	39.70	55.80	JACKSON	4.50	76.90	5.30	2.40	W210255	372901	835338	B	13930	09/01/88
										8.00	1.90		2.0	2138
UNDERGROUND MINE	1.60	34.50	55.20	PIKE	10.30	75.90	5.10	0.70	W208208	372903	822207	B	13490	09/01/88
										6.40	1.60		6.0	2804
SURFACE MINE	2.00	34.00	58.80	PIKE	7.20	80.40	5.00	0.70	W212059	372904	820435	B	14210	09/01/88
										5.20	1.50		7.5	2804
SURFACE MINE	1.30	35.50	60.70	PIKE	3.80	82.80	5.10	0.60	W212060	372904	820543	B	14740	09/01/88
										6.20	1.50		8.0	2777
SURFACE MINE	1.40	34.70	59.20	PIKE	6.10	80.60	5.20	0.60	W212081	372905	820527	B	14350	09/01/88
										6.10	1.40		8.0	2804
ROAD CUT	3.10	34.30	46.40	FLOYD	19.30	65.60	4.60	1.00	W208197	372915	824922	B	11650	09/01/88
										8.00	1.50		1.5	2804
ROAD CUT	3.30	40.00	49.20	FLOYD	10.80	72.10	5.20	1.10	W208104	372920	824922	B	13060	09/01/88
										8.90	1.90		4.5	2057
UNDERGROUND MINE	2.30	39.70	53.30	FLOYD	7.00	76.50	5.30	2.40	W210316	372953	824366	B	13770	09/01/88
										7.30	1.50		4.5	2138
SURFACE MINE	4.10	37.90	59.60	LEE	2.50	80.20	5.30	0.60	W211631	372959	834926	B	14150	09/01/88
										9.50	1.90		2.0	2633
CONGLETON BROS MINE	6.80	37.30	51.10	LEE	11.60	71.30	4.90	1.00	D176684	373000	834500	B	12710	09/01/88
										9.70	1.50		1.5	2579
SURFACE MINE	3.50	39.00	46.10	OWSLEY	14.90	68.30	4.90	4.10	W213949	373012	833512	B	12420	09/01/88
										6.10	1.70		3.5	2192
SURFACE MINE	3.60	36.00	53.00	BREATHITT	11.00	73.60	4.60	1.10	W211617	373035	830832	B	12760	09/01/88
										8.10	1.60		1.0	2804
SURFACE MINE	5.00	37.60	60.30	LEE	2.10	80.60	5.20	0.70	W210253	373035	834742	B	14250	09/01/88
										9.60	1.80		1.5	2579
UNDERGROUND MINE	2.50	37.90	52.50	FLOYD	9.60	74.30	5.10	1.30	W210315	373045	824219	B	13230	09/01/88
										8.10	1.60		3.0	2723
SURFACE MINE	1.80	32.70	62.10	PIKE	5.20	81.90	5.10	0.90	W210431	373054	820955	B	14460	09/01/88
										5.30	1.60		8.0	2804
PROSPECT	2.60	31.20	51.70	PIKE	17.10	69.60	4.40	0.70	W210430	373054	821022	B	12060	09/01/88
										6.70	1.50		2.0	2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
PROSPECT	1.40	36.10	57.10	6.80	PIKE	78.90	5.30	0.80	373055	821021	B	14120	09/01/88
									6.50	1.70		7.5	2804
PROSPECT	2.00	37.70	54.30	8.00	PIKE	77.90	5.30	1.60	373058	821021	B	13950	09/01/88
									5.30	1.90		7.5	2309
SURFACE MINE	2.00	45.20	48.50	6.30	PIKE	75.80	5.40	3.90	373115	823032	B	14010	09/01/88
									7.00	1.60		3.5	2147
SURFACE MINE	4.10	33.80	55.40	10.80	JACKSON	73.30	4.90	0.60	373115	840514	B	12900	09/01/88
									8.80	1.60		2.0	2804
SURFACE MINE	5.20	36.50	55.40	8.10	BREATHITT	76.00	5.10	0.70	373117	831140	B	13270	09/01/88
									8.50	1.60		1.0	2804
SURFACE MINE	2.70	37.60	58.60	3.80	PIKE	81.20	5.40	0.80	373118	823029	B	14340	09/01/88
									7.10	1.70		3.5	2777
SURFACE MINE	3.80	38.60	54.20	7.20	BREATHITT	77.20	5.00	0.70	373118	831117	B	13570	09/01/88
									8.40	1.50		1.5	2804
SURFACE MINE	3.70	36.10	53.80	10.10	BREATHITT	73.50	5.10	0.90	373120	831120	B	13070	09/01/88
									8.80	1.60		2.0	2804
ROAD CUT	3.00	40.70	49.60	9.70	FLOYD	72.40	5.10	5.90	373121	824735	B	13300	09/01/88
									5.40	1.50		3.0	2804
SURFACE MINE	3.70	37.70	54.50	7.80	BREATHITT	75.90	5.20	1.80	373122	831120	B	13410	09/01/88
									7.50	1.80		2.5	2505
SURFACE MINE	2.40	35.70	51.50	12.80	BREATHITT	71.90	4.70	1.50	373123	830533	B	12670	09/01/88
									7.70	1.40		1.0	2804
SURFACE MINE	3.60	41.70	51.50	6.80	OWSLEY	74.70	5.30	3.10	373139	833807	B	13490	09/01/88
									8.30	1.80		3.0	2102
UNDERGROUND MINE	3.30	33.20	47.00	18.80	FLOYD	65.40	4.60	1.90	373147	823852	B	11770	09/01/88
									7.10	1.20		4.5	2578
ROAD CUT	2.00	38.10	49.70	12.20	FLOYD	72.10	5.00	1.60	373203	824706	B	12970	09/01/88
									7.60	1.50		4.5	2741
UNDERGROUND MINE	3.60	34.80	50.40	14.80	FLOYD	69.60	4.80	0.80	373235	824021	B	12480	09/01/88
									8.50	1.50		3.5	2804
SURFACE MINE	3.30	37.50	56.10	6.40	BREATHITT	76.20	4.80	0.70	373236	830538	B	13390	09/01/88
									10.50	1.40		1.0	2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				BREATHITT									
6.90	34.30	58.10	7.60	71.50	4.40	0.60	373243	830543	B	12250	0.5	2804	09/01/88
PROSPECT				BREATHITT									
3.60	43.20	49.40	7.40	76.50	4.80	2.00	373245	831516	B	13590	3.0	2714	09/01/88
ROAD CUT				FLOYD									
2.80	40.80	50.20	9.00	74.60	5.30	1.10	373248	824624	B	13450	4.5	2804	09/01/88
SURFACE MINE				FLOYD									
4.10	35.60	47.70	16.70	67.20	4.60	2.20	373251	824252	B	12080	4.5	2804	09/01/88
SURFACE MINE				BREATHITT									
3.40	38.00	53.40	8.60	73.70	5.30	0.80	373259	831523	B	13250	1.5	0	09/01/88
PORTAL				MAGOFFIN									
3.40	36.60	50.60	12.80	71.50	4.80	1.00	373323	825650	B	12700	0.0	0	09/01/88
CONSTRUCTION SITE				PIKE									
4.30	36.80	49.80	13.40	71.10	4.50	1.20	373329	823347	B	12690	1.5	2804	09/01/88
CONSTRUCTION SITE				PIKE									
5.70	37.70	56.40	5.90	78.50	5.00	0.80	373330	823345	B	13860	2.0	2804	09/01/88
CONSTRUCTION SITE				PIKE									
5.50	34.20	51.60	14.20	70.70	4.70	0.90	373330	823348	B	12460	1.5	2804	09/01/88
SURFACE MINE				BREATHITT									
3.40	36.30	49.70	14.00	69.70	4.80	0.70	373403	831236	B	12470	1.0	2804	09/01/88
SURFACE MINE				BREATHITT									
4.20	37.10	51.40	11.50	71.70	4.80	0.70	373409	831242	B	12780	1.0	2804	09/01/88
ROAD CUT				LEE									
3.60	39.60	54.40	6.00	75.90	5.20	2.50	373424	834224	B	13660	2.5	2057	09/01/88
SURFACE MINE				PIKE									
3.00	37.50	55.90	5.60	77.50	5.00	0.60	373454	822537	B	13710	2.0	2804	09/01/88
SURFACE MINE				PIKE									
3.60	36.10	60.20	3.70	79.70	5.00	0.70	373459	822537	B	14070	2.0	2759	09/01/88
ROAD CUT				LEE									
5.10	38.30	57.60	4.10	77.70	5.30	0.60	373504	834201	B	13840	1.0	2806	09/01/88
ROAD CUT				FLOYD									
3.30	36.80	53.60	9.60	74.80	5.20	0.80	373510	824501	B	13380	5.0	2804	09/01/88

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ROAD CUT				FLOYD									
2.80	28.80	36.10	35.10			52.30	3.90	1.00	373513	824601	B	9200	09/01/88
									6.40	1.30		2.5	2804
ROAD CUT				FLOYD									
2.10	45.00	41.50	13.50			68.10	5.30	5.00	373513	824603	B	12730	09/01/88
									6.60	1.50		4.5	2633
UNDERGROUND MINE				FLOYD									
4.50	35.30	52.00	12.70			71.40	4.70	0.70	373536	824309	B	12580	09/01/88
									9.00	1.50		1.0	2804
SURFACE MINE				MAGOFFIN									
3.50	36.30	58.20	5.50			77.40	5.10	0.70	373540	825414	B	13590	09/01/88
									9.70	1.60		1.0	2804
SURFACE MINE				MAGOFFIN									
3.70	37.10	50.10	12.80			70.70	4.90	1.00	373606	830732	B	12520	09/01/88
									9.10	1.50		1.0	2804
UNDERGROUND MINE				PIKE									
1.90	35.30	54.00	10.70			75.00	5.10	0.50	373612	822230	B	13290	09/01/88
									7.50	1.20		3.0	2912
SURFACE MINE				MAGOFFIN									
5.80	35.70	54.40	9.90			74.10	5.00	0.70	373654	830722	B	12940	09/01/88
									8.80	1.50		1.0	2804
SURFACE MINE				MAGOFFIN									
3.50	35.10	51.70	13.20			71.70	4.70	0.80	373657	830105	B	12680	09/01/88
									8.10	1.50		1.5	2804
SURFACE MINE				MAGOFFIN									
3.70	36.30	49.90	13.80			69.70	4.60	3.50	373700	830107	B	12520	09/01/88
									7.00	1.40		1.5	2039
SURFACE MINE				MAGOFFIN									
4.60	40.40	56.10	3.50			80.20	5.40	0.80	373701	830110	B	14380	09/01/88
									8.40	1.70		3.0	2804
SURFACE MINE				MAGOFFIN									
3.40	37.00	44.60	18.40			65.20	4.70	3.80	373705	830110	B	11800	09/01/88
									6.60	1.30		3.0	2354
NICKEL CONSTR CO STRIP MINE				LEE									
15.70	37.20	44.30	18.50			63.70	4.60	2.50	373730	833730	B	11100	09/01/88
									9.20	1.50		3.0	2183
SURFACE MINE				BREATHITT									
5.20	38.40	59.90	1.70			81.80	5.50	0.70	373740	832723	B	14610	09/01/88
									8.50	1.80		3.5	2561
SURFACE MINE				WOLFE									
4.60	37.10	53.80	9.10			74.40	5.10	1.70	373744	832824	B	13340	09/01/88
									8.00	1.70		3.5	2660
SURFACE MINE				MAGOFFIN									
3.80	38.40	55.30	6.30			76.30	5.20	0.70	373754	825701	B	13620	09/01/88
									9.90	1.60		1.0	2804
SURFACE MINE				MAGOFFIN									
3.20	37.40	51.00	11.60			71.80	5.00	0.70	373759	825659	B	12870	09/01/88
									9.50	1.40		1.0	2804



## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE				PIKE									
3.30	38.30	53.80	7.90	75.90	5.00	1.40	373806	822952	B	13430	2.5	2750	
ROAD CUT				PIKE									
1.90	32.90	54.90	12.20	74.50	4.60	0.50	373845	821603	B	13140	3.0	2579	
ROAD CUT				PIKE									
2.10	36.70	57.90	5.40	79.80	5.30	0.90	373849	821502	B	14200	5.5	2804	
UNDERGROUND MINE				PIKE									
3.60	36.30	58.80	4.90	78.50	5.00	0.80	373924	822534	B	13750	1.5	2804	
UNDERGROUND MINE				PIKE									
2.80	34.00	56.60	9.40	76.20	5.00	0.60	373927	822052	B	13470	2.5	2552	
SURFACE MINE				MAGOFFIN									
3.30	36.80	49.50	13.70	69.60	4.90	1.00	373932	825931	B	12480	1.0	2804	
SURFACE MINE				MAGOFFIN									
3.20	37.20	50.20	12.60	69.90	5.00	2.00	373933	825928	B	12610	1.5	2417	
SURFACE MINE				WOLFE									
4.70	39.90	52.30	7.80	72.60	5.00	4.20	373958	833517	B	13230	3.0	2084	
PORTAL				FLOYD									
3.60	39.90	50.80	9.30	70.70	5.10	2.30	374015	824523	B	12860	3.0	2264	
ROAD CUT				PIKE									
1.80	39.70	48.90	11.40	71.20	5.00	5.90	374019	821653	B	13170	4.0	2156	
SURFACE MINE				MAGOFFIN									
3.40	34.90	49.60	15.50	69.10	4.60	1.30	374019	831211	B	12140	1.0	2804	
SURFACE MINE				MAGOFFIN									
3.50	43.60	48.50	7.90	74.50	5.40	2.00	374036	830334	B	13510	3.0	2606	
UNDERGROUND MINE				FLOYD									
3.70	36.40	48.40	15.20	68.80	4.80	2.20	374038	824516	B	12430	4.5	2390	
UNDERGROUND MINE				FLOYD									
3.80	38.30	45.90	15.80	68.00	4.90	2.90	374038	824517	B	12300	4.5	2246	
SURFACE MINE				MAGOFFIN									
6.50	39.60	54.90	5.50	75.20	4.90	1.10	374040	830325	B	13350	1.0	2570	
SURFACE MINE				FLOYD									
5.50	33.30	45.00	21.70	62.60	4.40	0.70	374147	834524	B	11160	1.5	2804	

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
PROSPECT													
6.10	38.70	57.70	3.60	WOLFE	76.10	5.10	1.50	374219	833939	B	13300	2.0	09/01/88
													2264
UNDERGROUND MINE													
2.40	37.50	50.10	12.40	PIKE	71.50	5.00	2.40	374226	822214	B	12860	4.0	09/01/88
													2498
UNDERGROUND MINE													
5.00	33.10	50.90	16.00	FLOYD	68.30	4.40	1.10	374233	823758	B	12100	1.0	09/01/88
													2804
UNDERGROUND MINE													
5.70	33.00	52.20	14.80	FLOYD	70.00	4.50	0.80	374233	823801	B	12310	4.5	09/01/88
													2804
UNDERGROUND MINE													
3.40	40.30	52.60	7.10	PIKE	76.30	5.30	2.80	374244	822139	B	13780	4.0	09/01/88
													2282
SURFACE MINE													
3.40	29.50	43.80	26.70	MARTIN	59.10	3.90	1.30	374252	823329	B	10300	1.5	09/01/88
													2804
UNDERGROUND MINE													
3.40	36.10	54.90	9.00	MARTIN	74.30	4.70	1.10	374257	823721	B	13110	1.0	09/01/88
													2804
SURFACE MINE													
3.70	34.80	52.40	12.80	MARTIN	70.80	4.70	1.10	374310	823302	B	12530	2.0	09/01/88
													2804
SURFACE MINE													
3.00	38.60	57.00	4.40	MARTIN	78.60	5.10	0.60	374310	823447	B	13850	1.5	09/01/88
													2804
SURFACE MINE													
3.50	41.30	53.90	4.80	FLOYD	78.80	5.40	0.60	374310	824042	B	13960	1.0	09/01/88
													2912
SURFACE MINE													
3.50	35.90	48.40	15.70	MARTIN	68.60	4.30	2.30	374316	823155	B	12170	1.5	09/01/88
													2543
UNDERGROUND MINE													
2.80	34.30	50.70	15.00	MARTIN	69.30	4.70	0.90	374316	823443	B	12240	1.0	09/01/88
													2804
UNDERGROUND MINE													
2.40	33.40	39.90	26.70	PIKE	58.20	4.20	4.10	374335	822145	B	10640	4.5	09/01/88
													2480
UNDERGROUND MINE													
2.10	37.70	54.30	8.00	MARTIN	75.90	5.20	1.20	374336	823049	B	13520	3.5	09/01/88
													2696
CONSTRUCTION SITE													
4.90	36.00	55.40	8.60	WOLFE	73.50	5.00	1.10	374404	833336	B	13120	1.5	09/01/88
													2804
AUGER MINE													
5.30	33.10	50.80	16.10	MARTIN	67.50	4.60	0.80	374444	822046	B	11930	1.5	09/01/88
													2804

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Oxygen	Longitude	Rank	Free Swell	Htg Val	Last Chg
SURFACE MINE	2.80	35.10	50.10	MARTIN	14.80	69.80	4.60	W211635	0.90	374503	8.30	822918	B	12300	1.5	09/01/88
												1.60				2804
PROSPECT	10.70	31.20	53.00	MARTIN	15.80	65.10	4.00	W208051	0.70	374504	13.10	822010	B	11230	0.0	09/01/88
												1.30				2804
SURFACE MINE	2.50	37.50	53.50	MARTIN	9.00	75.30	5.00	W211687	1.00	374506	8.10	822727	B	13310	2.5	09/01/88
												1.60				2804
PROSPECT	4.20	37.70	52.80	MARTIN	9.50	74.80	5.00	W208054	0.70	374520	8.30	822002	B	13400	3.5	09/01/88
												1.70				2786
SURFACE MINE	4.30	35.70	50.70	MARTIN	13.60	71.50	4.90	W208050	0.90	374526	7.70	822000	B	12770	4.5	09/01/88
												1.40				2804
PROSPECT	5.00	36.90	60.00	MARTIN	3.10	80.30	5.30	W208053	0.70	374526	8.90	822005	B	14440	3.0	09/01/88
												1.70				2579
SURFACE MINE	4.20	35.30	51.10	MARTIN	13.60	71.40	4.80	W208055	0.90	374526	7.80	822011	B	12770	1.0	09/01/88
												1.50				2804
SURFACE MINE	4.10	34.20	49.50	MARTIN	16.30	67.80	4.40	W212504	1.10	374529	9.00	823215	B	11820	1.5	09/01/88
												1.40				2804
PROSPECT	13.80	32.00	47.90	MARTIN	20.10	60.30	3.80	W208052	0.50	374535	14.00	821954	B	10090	0.0	09/01/88
												1.30				2804
SURFACE MINE	3.70	37.60	56.30	MARTIN	6.10	76.60	4.90	W210262	1.40	374546	9.50	823826	B	13450	1.5	09/01/88
												1.50				2750
SURFACE MINE	3.90	29.00	48.20	MARTIN	22.80	64.00	3.50	W210263	0.40	374552	8.20	823839	B	10970	1.0	09/01/88
												1.10				2804
SURFACE MINE	3.00	35.40	53.00	MARTIN	11.60	73.00	4.60	W211634	0.60	374554	8.80	822756	B	12840	1.5	09/01/88
												1.40				2804
SURFACE MINE	2.80	37.90	52.60	MARTIN	9.50	74.50	5.00	W212596	1.40	374556	7.90	822315	B	13370	3.0	09/01/88
												1.70				2804
SURFACE MINE	5.70	38.40	54.50	JOHNSON	7.10	76.10	5.10	W203623	0.70	374629	9.50	824059	B	13520	1.0	09/01/88
												1.50				2660
SURFACE MINE	5.70	33.00	48.50	MARTIN	18.50	66.60	4.70	W205332	0.60	374640	8.10	823610	B	11730	1.0	09/01/88
												1.50				2804
ROAD CUT	3.70	40.60	54.90	WOLFE	4.50	77.00	5.30	W210433	2.10	374717	9.20	832059	B	13790	1.5	09/01/88
												1.90				2039

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	4.00	39.60	52.30	JOHNSON	8.10	75.20	W209895	1.00	374723 9.50	824258 1.10	B	13330 1.0	09/01/88 2912
SURFACE MINE	2.60	29.70	36.30	JOHNSON	34.00	52.40	W210293	1.80	374727 6.60	824302 1.20	B	9370 1.0	09/01/88 2804
UNDERGROUND MINE	1.90	37.20	54.90	MARTIN	7.90	76.80	W211637	1.80	374732 6.80	822123 1.70	B	13670 5.0	09/01/88 2480
SURFACE MINE	3.30	39.20	49.50	MORGAN	11.30	71.00	W210432	3.60	374732 7.10	831947 2.00	B	12820 3.0	09/01/88 2102
UNDERGROUND MINE	2.10	37.20	52.30	MARTIN	10.50	75.10	W211636	0.90	374749 6.90	822206 1.60	B	13230 4.0	09/01/88 2561
ROAD CUT	4.60	42.90	52.40	MORGAN	4.70	77.00	W213950	2.80	374815 8.40	832025 1.80	B	13800 4.5	09/01/88 2138
SURFACE MINE	3.50	35.20	59.40	MARTIN	5.40	77.60	W210501	0.80	374817 9.60	832220 1.60	B	13730 1.5	09/01/88 2804
PROSPECT	3.40	35.10	53.50	MARTIN	11.40	71.80	W210502	0.70	374823 9.90	823228 1.50	B	12590 1.0	09/01/88 2804
ROAD CUT	5.90	41.50	54.40	MORGAN	4.10	77.70	W213951	3.00	375020 8.40	831931 1.60	B	14020 4.5	09/01/88 2039
SURFACE MINE	5.10	35.60	50.50	MARTIN	13.90	69.80	W207982	0.90	375027 9.00	823451 1.50	B	12480 1.0	09/01/88 2804
SURFACE MINE	6.50	41.60	55.20	MORGAN	3.20	78.50	W209903	0.90	375101 10.20	831106 1.70	B	14030 1.5	09/01/88 2804
SURFACE MINE	4.20	32.90	44.10	MORGAN	23.00	60.30	W209905	3.00	375102 8.30	831115 1.10	B	10850 1.0	09/01/88 2579
SURFACE MINE	4.40	32.30	42.60	MORGAN	25.10	59.90	W209904	1.60	375104 7.90	831105 1.20	B	10610 1.0	09/01/88 2804
MINE FACE	10.20	32.40	42.40	JOHNSON	25.20	57.20	W205319	0.80	375255 11.30	824715 1.40	B	9970 0.0	09/01/88 2309
SURFACE MINE	4.00	35.30	49.00	MARTIN	15.70	68.80	W210029	0.50	375318 9.00	823555 1.40	B	12160 1.0	09/01/88 2804
UNDERGROUND MINE	5.80	39.10	51.00	JOHNSON	9.90	72.60	W205315	-3.20	375321 7.30	825151 1.70	B	13060 2.0	09/01/88 2057

## Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.10	38.80	51.70	MARTIN	73.00	W210028	1.50	375323	823509	B	13070	09/01/88
						5.20		9.40	1.40		1.0	2570
SURFACE MINE	4.90	37.90	54.20	LAWRENCE	74.40	W205318	0.60	375325	823555	B	13320	09/01/88
						5.20		10.20	1.70		1.0	2804
12.30	31.60	52.80	15.60	LAWRENCE	64.30	D182462	0.60	375331	823846	B	10820	09/01/88
						3.90		14.30	1.30		0.0	2804
SURFACE MINE	5.00	33.40	46.30	LAWRENCE	63.70	W207863	2.60	375350	823633	B	11310	09/01/88
						4.50		7.60	1.30		1.5	2624
4.90	30.10	55.60	14.30	LAWRENCE	69.80	D182463	0.80	375358	823907	B	12270	09/01/88
						4.50		9.20	1.40		0.0	2804
SURFACE MINE	6.60	38.80	60.20	JOHNSON	81.90	W203634	0.60	375425	825611	B	14290	09/01/88
						5.40		9.40	1.70		1.0	2453
3.10	37.40	48.30	14.30	LAWRENCE	70.10	D171586	0.70	375445	824440	B	12360	09/01/88
						4.70		8.80	1.40		0.0	0
2.30	33.00	30.90	36.10	LAWRENCE	46.90	D171593	6.60	375500	824345	B	8590	09/01/88
						3.50		6.00	0.90		0.0	0
2.60	32.30	32.20	35.50	LAWRENCE	49.70	D171594	4.10	375505	824345	B	8850	09/01/88
						3.70		6.00	1.00		0.0	0
MINE FACE	4.70	28.60	39.20	JOHNSON	54.30	W205316	0.80	375521	824842	B	9520	09/01/88
						3.90		7.50	1.30		1.0	2804
2.90	37.50	51.10	11.40	LAWRENCE	72.90	D171589	0.70	375550	824110	B	12840	09/01/88
						4.80		8.80	1.40		0.0	0
SURFACE MINE	3.70	43.10	52.00	MORGAN	76.90	W203632	3.30	375609	825954	B	14070	09/01/88
						5.50		7.80	1.60		4.0	2111
2.40	33.90	32.40	33.70	LAWRENCE	50.50	D171595	5.30	375635	824030	B	9080	09/01/88
						3.80		5.80	0.90		0.0	0
SURFACE MINE	4.50	39.50	52.40	MARTIN	75.00	W210026	0.90	375642	823401	B	13430	09/01/88
						5.20		9.30	1.50		1.0	2804
ROAD CUT	5.10	37.50	47.20	LAWRENCE	68.80	W213948	1.10	375644	823925	B	12200	09/01/88
						4.90		8.40	1.50		1.5	2804
ROAD CUT	8.50	35.90	60.70	LAWRENCE	80.20	W213939	0.70	375654	823935	B	14130	09/01/88
						4.80		9.40	1.50		1.5	2111

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	6.80	37.90	61.10	MORGAN	1.00	81.40	5.30	0.60	375702	825933	B	14260	09/01/88
									10.00	1.70		1.0	2408
ROAD CUT	4.30	31.60	42.80	LAWRENCE	25.60	59.80	4.20	0.60	375703	823956	B	10470	09/01/88
									8.50	1.30		1.0	2804
SURFACE MINE	5.20	36.50	50.40	LAWRENCE	13.10	70.70	5.10	1.90	375744	823335	B	12610	09/01/88
									7.60	1.60		1.5	2507
SURFACE MINE	7.40	36.60	61.70	JOHNSON	1.70	81.10	4.70	0.60	375829	825540	B	13960	09/01/88
									10.20	1.70		1.0	2714
SURFACE MINE	3.50	41.60	51.80	LAWRENCE	6.60	76.80	5.50	0.90	375917	824041	B	13750	09/01/88
									8.50	1.70		1.0	2804
SURFACE MINE	4.50	35.80	59.30	LAWRENCE	4.90	78.30	4.70	0.70	375919	824043	B	13720	09/01/88
									9.80	1.60		1.0	2804
	2.80	36.90	34.90	LAWRENCE	28.20	55.20	4.20	5.30	375920	823955	B	10020	09/01/88
									6.00	1.10		0.0	0
SURFACE MINE	15.90	38.00	53.30	LAWRENCE	8.70	70.50	4.90	0.80	380010	823753	B	12060	09/01/88
									13.40	1.70		0.0	2363
SURFACE MINE	4.70	41.70	51.40	MORGAN	6.90	74.50	5.30	2.80	380010	830343	B	13510	09/01/88
									9.00	1.50		1.0	2192
SURFACE MINE	5.80	37.20	50.40	MORGAN	12.40	70.30	4.80	0.70	380011	830329	B	12460	09/01/88
									10.50	1.30		1.0	2354
SURFACE MINE	6.00	31.10	41.20	MORGAN	27.70	55.90	4.00	1.20	380013	830329	B	9760	09/01/88
									10.10	1.10		0.0	2804
SURFACE MINE	5.20	36.80	47.70	MORGAN	15.50	66.00	4.80	3.30	380024	830555	B	12010	09/01/88
									9.00	1.40		2.0	2282
	5.20	39.00	55.40	LAWRENCE	5.60	77.00	5.30	0.70	380056	824623	B	13680	09/01/88
									9.80	1.60		1.5	2732
SURFACE MINE	3.80	40.20	51.50	ELLIOTT	8.30	73.90	5.00	2.00	380117	830040	B	13470	09/01/88
									9.30	1.50		1.0	2561
	2.90	38.10	54.80	LAWRENCE	7.10	76.60	5.10	0.80	380138	824818	B	13480	09/01/88
									8.90	1.50		0.0	0
	4.40	38.00	48.50	LAWRENCE	13.50	71.10	4.90	0.60	380139	824819	B	12670	09/01/88
									8.30	1.60		0.0	0

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
5.50	40.50	47.30	12.20	LAWRENCE	71.10	71.10	5.00	1.90	380140	823430	B	12800	09/01/88
									8.40	1.40		0.0	0
SURFACE MINE													
4.80	37.90	49.60	12.50	ELLIOTT	69.00	69.00	4.80	4.60	380144	830624	B	12500	09/01/88
									7.80	1.30		2.0	2012
SURFACE MINE													
5.00	38.00	56.80	5.20	ELLIOTT	76.80	76.80	5.20	1.40	380146	830622	H	13700	09/01/88
									9.80	1.60		1.0	2678
4.20	39.50	44.20	16.30	LAWRENCE	66.10	66.10	4.70	1.90	380154	823449	B	11940	09/01/88
									9.50	1.50		0.0	0
SURFACE MINE													
7.40	35.10	53.00	11.90	LAWRENCE	72.40	72.40	5.10	0.80	380217	824219	B	12560	09/01/88
									8.30	1.50		1.0	2804
4.30	41.80	43.90	14.30	LAWRENCE	67.70	67.70	4.70	4.30	380254	823439	B	12060	09/01/88
									7.70	1.30		0.3	2111
5.30	40.80	41.60	17.80	LAWRENCE	63.90	63.90	4.10	5.70	380254	824223	B	11550	09/01/88
									5.60	1.10		3.0	2093
5.40	41.80	52.50	5.70	LAWRENCE	75.10	75.10	5.00	1.20	380259	824218	B	13480	09/01/88
									10.30	1.70		1.5	2912
6.30	39.10	52.40	8.50	LAWRENCE	77.10	77.10	5.00	1.40	380333	825234	B	13720	09/01/88
									5.50	1.50		0.0	0
SURFACE MINE													
6.30	36.10	46.80	17.10	ELLIOTT	65.20	65.20	4.80	2.60	380417	830634	B	11750	09/01/88
									9.00	1.30		1.5	2417
6.60	38.80	51.70	9.50	LAWRENCE	71.80	71.80	4.80	3.50	380450	824619	B	12880	09/01/88
									8.80	1.50		0.0	0
4.70	43.70	49.60	6.70	LAWRENCE	74.10	74.10	5.20	4.50	380507	824700	B	13450	09/01/88
									8.00	1.50		0.0	0
5.10	37.80	55.10	7.10	LAWRENCE	75.40	75.40	5.10	0.60	380517	824553	B	13510	09/01/88
									9.20	1.60		2.0	2524
7.20	38.80	52.10	9.10	LAWRENCE	72.30	72.30	4.80	3.40	380545	825310	B	13000	09/01/88
									8.90	1.50		0.0	0
4.60	41.00	51.10	7.90	LAWRENCE	73.30	73.30	5.00	3.80	380555	824645	B	13270	09/01/88
									8.50	1.50		0.0	0
ROAD CUT													
4.20	43.50	45.50	11.00	LAWRENCE	69.80	69.80	5.00	3.80	380904	823826	B	12860	09/01/88
									8.80	1.60		4.0	2012

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
ROAD CUT	4.60	30.60	37.00	LAWRENCE	32.40	48.40	W211189	6.20	381017	823753	B	8910	09/01/88
							3.70	6.20	8.20	1.10		1.5	2237
ROAD CUT	5.50	38.60	52.90	LAWRENCE	8.50	72.70	W208436	3.70	381212	823613	B	13220	09/01/88
							5.10	3.70	8.40	1.60		4.0	2021
SURFACE MINE	3.70	38.80	51.00	CARTER	10.20	72.80	W211192	0.80	381218	825730	B	12930	09/01/88
							5.10	0.80	9.50	1.60		1.0	2804
SURFACE MINE	5.40	35.30	46.50	BOYD	18.20	53.80	W203629	2.40	381852	824507	B	11380	09/01/88
							4.50	2.40	9.80	1.30		1.0	2804
SURFACE MINE	7.80	40.90	52.70	BOYD	6.40	74.80	W203628	1.00	381907	824520	B	13250	09/01/88
							5.00	1.00	11.20	1.60		1.0	2804
DRILL CORE	4.10	40.00	48.60	CARTER	11.40	59.40	W211623	3.00	382004	830008	B	12520	09/01/88
							4.90	3.00	9.60	1.70		1.0	2219
ROAD CUT	7.00	44.50	51.40	CARTER	4.10	75.90	W207808	2.20	382132	825224	B	13900	09/01/88
							5.50	2.20	10.60	1.70		4.0	2084
SURFACE MINE	9.10	35.00	47.20	BOYD	17.80	53.40	W207457	0.80	382147	824431	B	11100	09/01/88
							3.90	0.80	12.80	1.30		1.0	2804
ROAD CUT	6.90	40.80	44.60	BOYD	14.60	61.80	W207896	7.80	382209	824729	B	11890	09/01/88
							4.50	7.80	10.00	1.30		4.5	2102
SURFACE MINE	4.60	40.30	47.80	CARTER	11.90	67.30	W211191	6.10	382323	830559	B	12270	09/01/88
							4.80	6.10	8.30	1.60		1.5	2102
SURFACE MINE	6.60	36.70	55.90	CARTER	5.40	76.50	W211193	0.80	382324	830607	B	13480	09/01/88
							5.10	0.80	10.50	1.70		1.5	2804
SURFACE MINE	7.60	38.20	48.40	BOYD	13.40	67.90	W207816	2.40	382328	824417	B	12320	09/01/88
							4.80	2.40	10.10	1.40		2.5	2579
ROAD CUT	7.70	43.70	49.70	BOYD	6.60	73.90	W208199	2.80	382439	824013	B	13250	09/01/88
							5.10	2.80	10.10	1.50		3.0	2624
ROAD CUT	5.20	30.20	39.10	BOYD	30.70	54.30	W207458	2.70	382447	824234	B	9780	09/01/88
							3.80	2.70	7.30	1.20		1.0	2804
SURFACE MINE	10.10	40.00	55.20	GREENUP	4.80	72.80	W207107	0.90	382501	825108	B	13440	09/01/88
							4.90	0.90	14.90	1.70		1.0	2804
SURFACE MINE	4.70	38.80	38.60	GREENUP	22.60	59.80	W207106	3.70	382510	825107	B	10910	09/01/88
							4.50	3.70	8.20	1.20		2.5	2471



Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	CarLon	Hydrogr	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
								Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	5.90	41.70	44.60	GREENUP	13.70	66.20	W207108	4.90	382548	825437	B	12300	09/01/88
								5.80	8.00	1.40		1.0	2003
ROAD CUT	5.20	46.30	46.90	GREENUP	6.80	74.20	W207862	5.70	382839	825208	B	13520	09/01/88
								2.00	9.80	1.50		3.0	2039
SURFACE MINE	6.00	33.50	51.10	GREENUP	15.40	68.10	W208434	4.60	383014	824055	B	11960	09/01/88
								0.90	9.50	1.50		1.5	2804

Coal Field Information Printout for

MD - Maryland

Coal Field Information Printout for: MD - Maryland

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BUFFALO COAL CO NO 240	1.10	18.50	65.00	16.50	GARRETT	73.70	4.20	1.20	391833	792340	B	12830	09/01/88
									3.60	0.80		8.0	2912
BUFFALO COAL CO NO 240	3.50	20.40	64.70	14.90	GARRETT	72.70	3.90	0.40	391854	792315	B	12500	09/01/88
									6.50	1.60		1.5	2912
GRAFTON COAL CO NO 173	0.70	20.40	68.80	10.80	GARRETT	78.20	4.40	2.70	392209	791642	B	13740	09/01/88
									2.50	1.40		9.0	2183
GRAFTON COAL CO NO 211	1.00	16.90	68.30	14.80	GARRETT	75.70	4.00	1.00	392215	791722	B	13090	09/01/88
									3.10	1.40		7.5	2785
YIOGH TREE FARM NO 260	2.00	22.40	69.20	8.40	GARRETT	79.00	4.50	0.70	392406	792702	B	13750	09/01/88
									6.20	1.20		3.8	2912
ALLEGHENY MINING NO 255	2.10	25.00	53.80	21.20	GARRETT	65.90	4.20	0.50	392520	792558	B	11470	09/01/88
									7.10	1.10		1.0	2768
LAOC COAL CO NO 250	0.90	21.10	56.50	22.40	GARRETT	65.60	4.00	4.40	392750	792432	B	11640	09/01/88
									2.40	1.20		9.0	2129
BESSERMER IRON&COAL NO 196	1.40	19.30	73.90	6.80	ALLEGANY	82.20	4.40	1.30	393008	790114	B	14310	09/01/88
									3.60	1.70		7.5	2912
UNION COAL CO NO 15	1.50	21.50	65.50	13.00	ALLEGANY	75.70	4.00	1.00	393116	785935	B	12950	09/01/88
									4.70	1.60		1.5	2408
	2.90	21.30	57.20	21.50	GARRETT	67.50	4.00	2.30	393434	791730	B	11940	09/01/88
									3.60	1.10		8.0	2705
	1.30	23.80	67.60	8.80	GARRETT	79.60	4.80	2.60	393522	791713	B	14220	09/01/88
									2.80	1.40		9.0	2363
BURNHAM COAL CO NO 238	0.70	22.50	54.60	22.90	GARRETT	66.10	4.10	3.60	393522	791721	B	11800	09/01/88
									2.30	1.00		4.0	2156
WINNER BROS COAL CO NO 202	2.10	19.70	74.50	5.80	ALLEGANY	83.50	4.50	1.00	393556	785635	B	14610	09/01/88
									3.40	1.80		9.0	2777
WINNER BROS COAL CO NO 207	1.40	15.90	58.00	26.10	ALLEGANY	63.40	3.60	2.10	393615	785529	B	11050	09/01/88
									3.40	1.40		4.0	2579
	1.30	25.70	66.60	7.70	GARRETT	81.50	4.80	1.30	393628	791609	B	14500	09/01/88
									3.20	1.50		9.0	2804
WINNER BROS COAL CO NO 207	1.30	20.40	66.80	12.80	ALLEGANY	77.00	4.30	0.80	393635	785607	B	13500	09/01/88
									3.40	1.70		9.0	2912

Coal Field Information Printout for: MD ~ Maryland

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Rank	Free Swell	Hemi	Temp		
1.50	27.60	64.10	8.30	79.60	W193857	2.80	393733	792735	B		14270	09/01/88			
-----															
DELTA MINING CO NO 224															
0.70	21.70	64.40	13.90	75.80	W189007	1.40	394009	791119	B		13280	09/01/88			
-----															
PONDEROSA COAL CO NO 243															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 248															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 249															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 250															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 251															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 252															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 253															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 254															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 255															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 256															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 257															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 258															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 259															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 260															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 261															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 262															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 263															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 264															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 265															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 266															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 267															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 268															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 269															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 270															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 271															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 272															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 273															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 274															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 275															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 276															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 277															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 278															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 279															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 280															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 281															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 282															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 283															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 284															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 285															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 286															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 287															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 288															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 289															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 290															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 291															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 292															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 293															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 294															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 295															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 296															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 297															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 298															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 299															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
-----															
PONDEROSA COAL CO NO 300															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B		11300	09/01/88			
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Coal Field Information Printout for

MI - Michigan

Coal Field Information Printout for: MI - Michigan

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Oxygen	Longitude	Rank	Free Swell	Htg Val	Last Chg
13.30		41.90	56.10	INGHAM	2.00	80.10	5.30	1.20	424053	9.70	841614	B	14310	0.0	09/01/88
															0
10.30		40.20	56.90	INGHAM	2.90	78.00	5.20	1.30	424056	11.00	841614	B	14080	0.0	09/01/88
															0
18.60		40.90	52.00	INGHAM	7.10	73.40	5.00	1.70	424456	11.40	844546	B	13100	0.0	09/01/88
															0

Coal Field Information Printout for

MO - Missouri

Coal Field Information Printout for: MO - Missouri

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
				BARTON			D174658		371312	943530	B	11720	09/01/88
2.30	36.00	42.50	21.50	65.20	4.50	3.60	4.30	0.90	5.5	2408			
				BARTON			D179880		372310	943420	B	12440	09/01/88
2.50	33.70	49.90	16.40	66.90	4.60	7.50	3.40	1.20	9.0	2408			
				BARTON			D179879		372310	943424	B	12140	09/01/88
2.40	32.40	49.30	18.30	65.50	4.50	6.40	4.20	1.10	8.5	2534			
				BARTON			D179877		372312	943424	B	12580	09/01/88
2.90	33.40	50.90	15.70	68.40	4.70	5.30	4.80	1.10	7.5	2255			
				BARTON			D174659		372312	943528	B	11720	09/01/88
2.30	36.00	42.50	21.50	65.20	4.50	3.60	4.30	0.90	5.5	2408			
				BARTON			D174660		372315	943515	B	12800	09/01/88
1.90	36.20	49.20	14.60	70.60	4.80	4.60	4.30	1.10	8.0	2057			
				VERNON			D179882		374227	942904	B	11980	09/01/88
6.20	34.90	47.40	17.70	65.60	4.60	5.10	5.70	1.30	7.0	2102			
				VERNON			D175940		374519	943005	B	12020	09/01/88
3.40	36.30	46.10	17.60	67.60	4.50	3.10	6.10	1.10	8.0	2066			
				VERNON			D175941		374519	943006	B	12020	09/01/88
3.40	36.30	46.10	17.60	67.60	4.50	3.10	6.10	1.10	8.0	2066			
				VERNON			D175942		374520	942936	B	12340	09/01/88
3.90	38.70	44.40	16.90	67.30	4.60	5.60	4.50	1.10	7.5	1958			
				VERNON			D175943		374520	942940	B	12340	09/01/88
3.90	38.70	44.40	16.90	67.30	4.60	5.60	4.50	1.10	7.5	1958			
				VERNON			D179886		374555	943634	B	12010	09/01/88
4.00	37.10	45.30	17.60	66.60	4.60	5.30	4.70	1.20	6.0	2309			
				VERNON			D179884		374558	943637	B	12270	09/01/88
5.30	37.70	44.10	18.20	67.30	4.70	4.60	4.00	1.20	8.0	2264			
				ST CLAIR			D179881		381155	934918	B	10700	09/01/88
5.80	33.00	43.40	23.60	56.70	4.10	10.40	4.10	1.10	4.5	2138			
				HENRY			D179981		381420	935708	B	12820	09/01/88
8.70	35.40	51.60	13.00	71.20	4.70	3.40	6.60	1.10	5.5	2255			
				HENRY			D179980		381420	935710	B	12240	09/01/88
7.70	34.80	48.60	16.60	67.40	4.60	3.80	6.50	1.10	5.5	2273			



## Coal Field Information Printout for: MO - Missouri

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
8.20	32.40	46.50	HENRY	21.10	59.00	10.20	381422	935709	B	10880	09/01/88	2129			
7.70	33.50	47.30	HENRY	19.20	61.20	9.50	381422	935710	B	11350	09/01/88	2471			
POWER MINE															
7.30	40.20	41.60	HENRY	18.20	63.70	9.10	381434	935743	B	11660	09/01/88	0			
POWER MINE															
7.80	43.20	44.50	HENRY	12.30	70.80	2.90	381437	935754	B	12860	09/01/88	0			
POWER MINE															
6.60	43.50	36.60	HENRY	19.90	61.70	3.50	381440	935809	B	10780	09/01/88	0			
7.00	32.90	43.00	BATES	24.10	59.90	4.80	381744	943827	B	10880	09/01/88	2111			
6.40	33.50	41.60	BATES	24.90	51.10	4.30	381745	943627	B	10870	09/01/88	2201			
MIDWAY MINE															
7.10	37.70	42.40	BATES	19.90	63.20	5.50	381855	943400	B	11450	09/01/88	2039			
MIDWAY MINE															
7.10	37.70	42.40	BATES	19.90	63.20	5.50	381858	943430	B	11450	09/01/88	2039			
POWER MINE															
10.50	42.50	49.60	HENRY	7.90	71.80	6.30	382210	935504	B	13220	09/01/88	0			
10.00	35.80	46.00	HENRY	18.20	63.90	4.00	382245	935640	B	11370	09/01/88	2246			
9.10	32.80	43.00	HENRY	24.20	57.30	8.10	382250	935640	B	10360	09/01/88	2021			
8.80	40.40	53.50	HENRY	6.10	73.50	4.40	382625	934217	B	13370	09/01/88	2183			
8.90	39.70	51.30	HENRY	9.00	70.40	6.00	382625	934219	B	12870	09/01/88	2111			
TEBO MINE, PEABODY COAL CO															
9.90	43.40	47.30	HENRY	9.30	70.50	6.00	382640	934138	B	12950	09/01/88	0			
10.20	34.00	48.00	HOWARD	18.00	63.90	5.50	391147	922955	B	11460	09/01/88	2309			

Coal Field Information Printout for: MO - Missouri

Location		County		Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg		
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
8.30	37.30	47.10	15.60	66.30	D182825	4.30	5.50	391152	922955	B	11960	09/01/88
								7.20	1.10		1.0	2039
8.80	31.70	47.90	20.40	50.10	D179975	4.20	5.60	391420	923115	B	10900	09/01/88
								7.70	1.00		1.0	2129
11.20	33.80	54.60	11.60	68.10	D179979	4.60	6.10	391754	922647	B	12400	09/01/88
								8.50	1.10		1.0	2417
7.70	40.70	43.80	15.50	67.00	D182627	4.50	4.60	391950	914702	B	12080	09/01/88
								7.40	1.00		3.0	2201
10.50	39.80	45.00	15.20	65.40	D173799	4.50	5.90	392017	923518	B	11770	09/01/88
								7.90	1.10		0.0	0
11.20	38.70	48.80	12.50	66.40	D182622	4.70	6.00	392031	923452	B	12110	09/01/88
								9.30	1.10		1.0	2030
13.30	35.60	48.10	15.30	62.90	D182820	4.40	6.50	392032	923452	B	11270	09/01/88
								9.90	1.00		1.0	2066
BEE VEER MINE					D172326	4.80	4.80	393122	923924	B	12370	09/01/88
6.60	42.80	44.60	12.60	69.10				7.60	1.10		0.0	0
9.70	34.70	48.60	16.70	62.40	D179898	4.20	8.20	393123	924015	B	11420	09/01/88
								7.50	1.00		1.0	2012
9.30	46.20	43.40	10.40	70.60	D172324	5.00	4.20	393827	923007	B	12760	09/01/88
								8.70	1.10		0.0	0
BEE VEER MINE					D174655	4.80	5.30	393945	923004	B	12380	09/01/88
11.70	42.70	45.40	11.90	69.10				7.80	1.10		2.0	2012
BEE VEER MINE					D174654	4.80	5.30	393946	923004	B	12380	09/01/88
								7.80	1.10		0.0	0
10.70	40.00	50.60	9.40	70.50	D179892	4.90	5.50	394016	922943	B	12820	09/01/88
								8.50	1.20		5.0	1994
10.60	41.90	46.80	11.30	70.20	D179893	4.90	3.80	394017	922943	B	12630	09/01/88
								8.60	1.20		3.5	2183
12.70	35.30	48.30	16.40	63.20	D179894	4.50	4.60	394017	922945	B	11390	09/01/88
								10.00	1.30		1.0	2066
11.10	35.80	47.70	16.50	62.70	D179896	4.30	6.20	394018	922945	B	11350	09/01/88
								9.10	1.20		1.0	2021

Coal Field Information Printout for: MO - Missouri

Location	Moisture	Volatiles	Fxd Crbn	County	Carbua	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
14.70	32.20	46.00	21.80	ADAIR	57.10	3.80	9.10	401302	923923	B	10420	09/01/88
								7.30	0.90		0.0	2075
18.20	42.50	45.30	12.20	SULLIVAN	69.30	4.90	3.90	401922	925147	B	12470	09/01/88
								8.50	1.20		0.0	0
15.50	42.50	40.70	16.80	PUTNAM	63.90	4.50	3.70	402509	925328	B	11550	09/01/88
								10.00	1.10		0.0	0
17.00	44.00	42.50	13.50	PUTNAM	70.20	4.60	3.40	402740	924440	B	12270	09/01/88
								7.10	1.20		0.0	0
16.00	45.40	43.10	11.50	PUTNAM	70.50	4.80	3.90	402746	924440	B	12370	09/01/88
								8.10	1.20		0.0	0

Coal Field Information Printout for

MS - Mississippi

Coal Field Information Printout for: MS - Mississippi

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	49.60	49.60	38.30	LAUDERDALE	12.10	55.00	3.90	D172317	322401	883339	L	9110	09/01/88
							4.20		23.80	1.00		0.0	0
	51.30	49.50	44.80	LAUDERDALE	5.70	62.70	4.30	D172319	322421	883243	L	10550	09/01/88
							2.50		23.60	1.20		0.0	0
	44.80	42.70	33.70	SCOTT	23.60	53.40	4.20	D172316	322855	892300	L	9260	09/01/88
							2.40		15.70	0.70		0.0	0
	16.40	36.80	32.00	KEMPER	31.20	48.20	3.60	W218464	323610	883238	L	8110	09/01/88
							0.70		15.20	1.10		0.0	2678
	46.10	39.90	29.40	NESHOBA	30.70	46.40	3.50	W219964	324631	891256	L	8260	09/01/88
							6.90		11.50	1.00		0.0	2174
	47.00	48.60	32.70	NESHOBA	18.70	56.20	3.80	W219956	324804	891308	L	9800	09/01/88
							6.10		13.80	1.40		0.0	2210
	48.10	39.30	36.80	NESHOBA	33.90	52.00	3.60	W219953	325017	885515	L	8880	09/01/88
							1.10		18.30	1.10		0.0	2804

Coal Field Information Printout for

MT - Montana

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Frem Swell	Hemi Temp
DECKER MINE, TIPPLE SAMPLE	20.60	39.80	54.70	BIG HORN	5.50	72.00	4.90	0.60	450000	1064500	SB	12440	09/01/88
									15.90	1.10		0.0	0
DECKER MINE	19.60	46.60	47.80	BIG HORN	5.60	71.10	5.00	0.50	450217	1064900	SB	12250	09/01/88
									16.60	1.20		0.0	2201
DECKER MINE	22.00	40.40	54.90	BIG HORN	4.70	72.00	4.90	0.50	450242	1064907	SB	12460	09/01/88
									16.60	1.30		0.0	2219
DECKER MINE	22.30	40.80	54.70	BIG HORN	4.50	72.20	5.20	0.40	450312	1065030	SB	12500	09/01/88
									16.70	1.00		0.0	2219
DECKER MINE	23.20	39.30	54.50	BIG HORN	6.20	69.60	4.70	1.40	450318	1065018	SB	12090	09/01/88
									16.90	1.20		0.0	2111
DECKER MINE	22.10	41.80	53.60	BIG HORN	4.60	72.50	5.10	0.40	450321	1065018	SB	12540	09/01/88
									16.40	1.00		0.0	2273
DECKER MINE	22.60	39.50	51.30	BIG HORN	9.20	67.80	4.60	1.40	450323	1065011	SB	11740	09/01/88
									16.00	1.00		0.0	2147
DECKER MINE	22.30	40.80	54.40	BIG HORN	4.80	72.30	5.00	0.50	450324	1065011	SB	12520	09/01/88
									16.40	1.00		0.0	2219
DECKER MINE	22.60	39.80	54.10	BIG HORN	6.10	70.20	4.60	1.30	450330	1065002	SB	12090	09/01/88
									16.80	1.00		0.0	2354
HOLE M75-38	35.20	39.50	51.40	POWDER RIVER	9.10	57.00	4.10	0.50	450340	1060749	SB	11180	09/01/88
									17.90	1.40		0.0	2147
BEAR CR EMRIA	32.70	42.80	47.70	POWDER RIVER	9.50	65.60	4.40	1.00	450344	1061036	SB	11250	09/01/88
									18.20	1.30		0.0	2057
BEAR CR EMRIA	30.80	41.20	50.60	POWDER RIVER	8.20	68.00	4.60	0.40	450400	1061050	SB	11500	09/01/88
									17.40	1.40		0.0	2111
BEAR CR EMRIA	30.60	42.10	52.30	POWDER RIVER	5.60	67.50	4.90	0.30	450401	1060947	SB	11330	09/01/88
									20.50	1.20		0.0	2471
OUTCROP	36.30	47.10	46.00	POWDER RIVER	6.90	60.80	3.20	0.80	450401	1062430	SB	9200	09/01/88
									26.80	1.40		0.0	2453
BEAR CR EMRIA	33.00	40.30	52.20	POWDER RIVER	7.50	67.80	4.50	0.40	450430	1061207	SB	11490	09/01/88
									18.30	1.50		0.0	2111
BEAR CR EMRIA	37.80	40.50	44.90	POWDER RIVER	14.60	62.20	4.30	1.10	450443	1061037	SB	10420	09/01/88
									16.70	1.10		0.0	2003

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BEAR CR EMRIA	35.40	33.40	31.20	POWDER RIVER	43.70	3.50	5.70	1061111	SB	7540	0.0	0.0	0.0	2102
HOLE M75-35	41.00	51.50	7.50	POWDER RIVER	66.80	4.30	0.40	1060451	SB	11200	0.0	0.0	0.0	2228
BEAR CR EMRIA	42.70	48.90	8.40	POWDER RIVER	67.10	4.40	1.20	1061113	SB	11400	0.0	0.0	0.0	2228
BEAR CR EMRIA	42.90	43.80	13.30	POWDER RIVER	63.10	4.20	0.60	1061055	SB	10720	0.0	0.0	0.0	2111
HOLE M75-33	41.60	52.90	5.50	POWDER RIVER	68.90	4.50	0.30	1060628	SB	11690	0.0	0.0	0.0	2291
HOLE M75-20	40.30	53.80	5.90	POWDER RIVER	58.40	4.50	0.30	1061433	SB	11610	0.0	0.0	0.0	2192
BEAR CR EMRIA	45.40	46.40	8.20	POWDER RIVER	67.00	4.50	1.20	1061207	SB	11390	0.0	0.0	0.0	2147
BEAR CR EMRIA	43.10	48.60	8.30	POWDER RIVER	56.40	4.80	0.70	1061211	SB	11260	0.0	0.0	0.0	2156
HOLE M75-18	41.90	51.90	6.20	POWDER RIVER	58.80	4.90	0.40	1061455	SB	11690	0.0	0.0	0.0	2399
HOLE M75-13	40.90	52.80	6.30	POWDER RIVER	68.90	4.50	0.40	1061139	SB	11550	0.0	0.0	0.0	2246
HOLE M75-9	40.20	50.90	8.90	POWDER RIVER	66.30	4.70	0.30	1061402	SB	11250	0.0	0.0	0.0	2057
HOLE M75-16	42.00	51.70	6.30	POWDER RIVER	68.60	4.50	0.60	1060851	SB	11580	0.0	0.0	0.0	2435
OUTCROP	47.80	41.60	10.50	BIG HORN	58.90	3.30	0.40	1063425	SB	8910	0.0	0.0	0.0	2399
OUTCROP	47.50	42.50	10.00	ROSEBUD	59.20	3.60	0.30	1063420	SB	9070	0.0	0.0	0.0	2516
OUTCROP	45.70	48.70	5.60	POWDER RIVER	65.30	4.20	0.70	1062938	SB	10850	0.0	0.0	0.0	2138
OUTCROP	46.10	43.80	10.10	POWDER RIVER	59.00	3.30	0.90	1062803	SB	9050	0.0	0.0	0.0	2066



Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
OUTCROP	38.40	44.30	43.50	POWDER RIVER	12.20	57.80	3.00	D177B21	0.80	451730	1062404	SB	8690	09/01/88
										24.90	1.30		0.0	2084
OUTCROP	34.20	46.50	45.30	POWDER RIVER	8.20	59.40	3.20	D177B24	0.80	451803	1062727	SB	8950	09/01/88
										26.90	1.50		0.0	2183
OUTCROP	28.30	42.60	52.70	POWDER RIVER	4.70	68.60	4.40	D177B23	0.40	452036	1062819	SB	11490	09/01/88
										20.70	1.20		0.0	1940
OUTCROP	34.70	46.40	45.20	POWDER RIVER	8.40	59.60	3.10	D177B22	0.80	452059	1062912	SB	9000	09/01/88
										26.70	1.40		0.0	2156
	26.00	43.90	46.90	POWDER RIVER	9.20	65.20	4.90	D171967	0.30	453050	1060830	SB	11230	09/01/88
										19.30	1.10		0.0	0
	35.10	40.70	48.20	POWDER RIVER	11.10	66.70	4.60	D170203	0.30	453140	1060922	SB	11200	09/01/88
										16.20	1.10		0.0	0
	26.40	39.00	53.10	POWDER RIVER	7.90	69.70	4.40	D169481	0.50	453149	1051013	SB	11830	09/01/88
										16.30	1.20		0.0	0
	16.80	49.10	38.80	POWDER RIVER	12.10	58.00	4.60	D169031	0.40	453159	1060935	SB	9820	09/01/88
										23.60	1.30		0.0	0
	29.10	42.00	50.20	POWDER RIVER	7.80	68.50	4.70	D169477	0.30	453234	1060821	SB	11590	09/01/88
										17.70	1.00		0.0	0
	16.40	36.40	52.00	ROSEBUD	11.60	67.50	4.50	D163187	1.10	454852	1063652	SB	11630	09/01/88
										14.30	1.00		0.0	0
	20.70	39.00	52.20	ROSEBUD	8.80	69.60	4.80	D163181	0.80	454852	1063655	SB	12120	09/01/88
										15.00	1.00		0.0	0
	19.80	36.80	54.00	ROSEBUD	9.20	69.90	4.50	D163179	0.60	454856	1063655	SB	11910	09/01/88
										14.70	1.10		0.0	0
	25.50	36.40	50.30	ROSEBUD	13.30	64.80	4.30	D168919	4.20	455023	1064417	SB	11250	09/01/88
										12.50	0.90		0.0	0
	24.90	37.00	49.00	ROSEBUD	14.00	65.30	4.40	D168913	2.40	455149	1063526	SB	11230	09/01/88
										13.00	0.90		0.0	0
	26.40	39.30	48.30	ROSEBUD	12.40	66.50	4.70	D168917	0.70	455207	1064230	SB	11470	09/01/88
										14.70	1.00		0.0	0
ROSEBUD MINE, TIPPLE SAMPLE	15.80	36.50	48.30	ROSEBUD	15.20	64.80	4.40	D161321	4.20	455230	1063000	SB	11080	09/01/88
										10.40	1.00		0.0	0

Coal Field Information Printout for: MT - Montana

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
8.30	34.50	37.50	BROADWATER	27.90	47.40	0.40	455230 20.10	1113000 1.60	B	7100 0.0	09/01/88 0
25.50	35.50	51.20	ROSEBUD	13.20	62.90	5.60	455427 13.30	1063544 0.90	SB	11070 0.0	09/01/88 0
26.70	44.70	47.00	PRAIRIE	8.30	62.50	0.50	464500 23.60	1054500 1.10	SB	10110 0.0	09/01/88 0
3.60	31.30	61.70	JUDITH BASIN	7.00	71.80	2.80	464500 13.60	1095230 0.90	B	12180 0.0	09/01/88 0
34.50	37.50	51.10	RICHLAND	11.30	63.20	0.30	472230 20.50	1042150 1.10	L	10030 0.0	09/01/88 0
36.40	37.70	47.20	RICHLAND	15.10	60.00	0.50	472400 19.30	1042130 1.10	L	9520 0.0	09/01/88 0
15.80	38.40	27.30	MCCONE	34.30	41.70	1.50	473258 19.10	1061212 1.00	SB	6120 0.0	09/01/88 2300
23.60	39.70	36.10	GARFIELD	24.20	50.20	0.70	473431 21.00	1061725 0.90	SB	7640 0.0	09/01/88 2057

Coal Field Information Printout for

ND - North Dakota

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Hardgrove	Htg Val	Free Swell	Hemi Temp	Last Chg
	41.50	53.40	30.90	BOWMAN	15.70	50.60	3.10	D165992	2.70	26.70	1030000	L		7560	0.0		09/01/88
	45.00	44.40	47.60	BOWMAN	8.00	64.80	4.50	D165985	1.30	20.50	1030205	L		10930	0.0		09/01/88
	44.60	44.00	48.80	BOWMAN	7.20	65.50	4.60	D165982	1.30	20.50	1030203	L		10990	0.0		09/01/88
	42.20	44.10	44.80	BOWMAN	11.10	63.30	4.50	D165980	1.00	19.40	1030201	L		10690	0.0		09/01/88
	37.50	48.10	38.90	BOWMAN	13.00	62.80	4.90	D165979	1.60	16.70	1030202	L		10820	0.0		09/01/88
	42.30	43.30	44.40	BOWMAN	12.30	61.70	4.50	D165986	3.10	17.70	1030205	L		10540	0.0		09/01/88
	42.70	47.10	42.10	BOWMAN	10.80	64.00	4.80	D165990	1.60	17.90	1030205	L		11030	0.0		09/01/88
	46.20	46.30	43.50	BOWMAN	10.20	62.90	4.20	D165976	1.70	20.30	1030201	L		10370	0.0		09/01/88
	36.50	42.70	44.10	BOWMAN	13.20	60.80	4.00	D165989	4.60	16.60	1030205	L		10310	0.0		09/01/88
	29.50	37.90	35.00	ADAMS	27.10	49.60	3.60	D196079	3.40	15.60	1020337	L		8300	0.0		09/01/88
	36.80	39.10	31.80	HETTINGER	29.10	47.70	3.50	D196077	1.90	16.90	1022100	L		7720	0.0		09/01/88
	35.50	41.90	37.20	GRANT	20.90	55.80	4.10	D196080	1.60	16.70	1014143	L		9370	0.0		09/01/88
	35.40	42.70	44.10	GRANT	13.20	61.60	4.30	D196081	2.30	17.10	1015749	L		10440	0.0		09/01/88
	41.40	39.40	39.10	HETTINGER	21.50	54.70	4.30	D210372	3.10	15.40	1025255	L		9480	0.0		09/01/88
	37.20	42.50	43.60	HETTINGER	13.90	61.70	4.20	D210371	3.00	16.10	1023723	L		10640	0.0		09/01/88
	39.90	43.90	41.60	GOLDEN VALLEY	14.50	57.60	4.30	D196624	1.00	21.90	1040050	L		9780	0.0		09/01/88

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
34.30	34.90	33.30	33.30	GOLDEN VALLEY	31.80	46.60	3.20	D196627	4.90	464713	1040120	L	7610	09/01/88
										12.70	0.80		0.0	2120
43.40	39.20	40.00	40.00	GOLDEN VALLEY	20.80	54.40	3.70	D196637	1.60	464907	1040130	L	8950	09/01/88
										18.60	0.90		0.0	2156
40.90	41.10	46.20	46.20	GOLDEN VALLEY	12.70	61.40	4.00	D196640	1.40	465045	1040145	L	10180	09/01/88
										19.70	0.80		0.0	2246
23.10	42.30	37.20	37.20	STARK	20.50	54.50	3.80	D173466	6.40	465126	1024125	L	9380	09/01/88
										14.00	0.80		0.0	0
41.10	43.00	41.60	41.60	STARK	15.40	57.40	3.50	D213999	4.40	465417	1030900	L	9760	09/01/88
										18.10	1.20		0.0	2021
43.70	41.00	46.70	46.70	STARK	12.30	62.00	3.60	D213997	1.10	465457	1030000	L	10380	09/01/88
										19.80	1.20		0.0	2030
44.80	43.50	45.60	45.60	STARK	10.90	62.90	4.00	D213994	1.40	465512	1030345	L	10570	09/01/88
										19.50	1.30		0.0	2174
39.00	38.70	37.00	37.00	STARK	24.30	53.20	3.60	D213996	2.80	465602	1030956	L	9030	09/01/88
										15.00	1.10		0.0	2039
40.40	40.10	36.10	36.10	STARK	23.80	52.00	3.70	D213988	4.40	465634	1030504	L	8880	09/01/88
										15.10	1.00		0.0	1877
45.10	42.80	46.80	46.80	STARK	10.40	63.20	4.20	D213991	0.90	465655	1030031	L	10610	09/01/88
										20.20	1.10		0.0	2228
42.60	47.00	43.40	43.40	STARK	9.60	63.40	4.80	D213983	0.70	465749	1030502	L	10830	09/01/88
										20.30	1.20		0.0	2291
45.00	42.20	47.30	47.30	STARK	10.50	62.80	4.20	D213985	0.90	465849	1030318	L	10430	09/01/88
										20.50	1.10		0.0	2138
37.80	40.40	45.80	45.80	GOLDEN VALLEY	13.80	61.00	3.90	D196635	1.00	470041	1040100	L	10050	09/01/88
										19.30	1.00		0.0	2156
39.20	46.60	42.40	42.40	GOLDEN VALLEY	11.00	62.00	4.80	D196629	1.50	470115	1040015	L	10680	09/01/88
										19.50	1.20		0.0	2291
34.20	41.50	50.40	50.40	OLIVER	8.10	65.30	4.30	D165568	0.80	470300	1011510	L	10780	09/01/88
										20.40	1.10		0.0	0
33.20	44.20	49.20	49.20	OLIVER	6.60	65.20	4.40	D165570	0.40	470301	1011510	L	10870	09/01/88
										22.40	1.00		0.0	0

## Coal Field Information Printout for: ND - North Dakota

Location		Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
Moisture				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
-----												
SOUTH BEULAH MINE				MERCER	50.40	D165572		470830	1014501	L	10330	09/01/88
29.80	41.50	46.10	12.40			4.30	3.10	19.10	0.70		0.0	0
-----												
SOUTH BEULAH MINE				MERCER	55.50	D165573		470830	1014502	L	11070	09/01/88
32.90	43.10	49.40	7.50			4.70	1.00	20.60	0.70		0.0	0
-----												
SOUTH BEULAH MINE				MERCER	56.20	D165574		470830	1014503	L	8970	09/01/88
28.40	37.00	40.80	22.20			3.40	1.50	15.70	1.00		0.0	0
-----												
SOUTH BEULAH MINE				MERCER	54.40	D165575		470830	1014504	L	8780	09/01/88
30.10	35.90	40.10	24.00			3.20	1.30	16.10	1.00		0.0	0
-----												
DUNN				DUNN	62.10	D186054		471009	1025145	L	10490	09/01/88
38.00	43.20	43.60	13.20			4.20	1.60	17.90	1.00		0.0	2228
-----												
OLIVER				OLIVER	65.10	D186053		471142	1014433	L	11030	09/01/88
40.20	44.30	45.20	10.50			4.10	2.20	17.30	0.80		0.0	2354
-----												
OLIVER				OLIVER	52.50	D194035		471306	1012109	L	10530	09/01/88
33.60	44.10	45.40	16.50			4.50	0.80	20.50	1.10		0.0	1994
-----												
MERCER				MERCER	64.50	D175934		471439	1015338	L	10730	09/01/88
30.00	41.90	50.50	7.60			4.10	0.30	22.50	1.00		0.0	2129
-----												
MERCER				MERCER	61.90	D175938		471450	1014532	L	9880	09/01/88
35.20	44.40	46.60	9.00			3.80	0.50	23.60	.20		0.0	2084
-----												
MERCER				MERCER	63.00	D175936		471455	1015330	L	10550	09/01/88
27.70	42.30	46.40	11.30			4.20	1.70	18.80	1.00		0.0	2147
-----												
MERCER				MERCER	64.00	D165578		471505	1014510	L	10820	09/01/88
30.70	42.30	48.80	8.90			4.00	0.70	21.40	1.00		0.0	0
-----												
MERCER				MERCER	61.80	D165576		471510	1014510	L	10170	09/01/88
31.10	38.80	46.50	14.70			3.70	1.00	17.80	1.00		0.0	0
-----												
MERCER				MERCER	62.50	D175932		471517	1015412	L	10220	09/01/88
27.50	39.40	49.20	11.40			4.10	0.40	20.80	0.80		0.0	2084
-----												
MERCER				MERCER	64.30	D175930		471520	1015422	L	10620	09/01/88
27.50	41.40	50.00	8.60			4.20	0.60	21.30	1.00		0.0	2129
-----												
MERCER				MERCER	65.80	D186051		471530	1015345	L	11090	09/01/88
34.60	44.20	47.80	8.00			4.40	0.50	20.40	0.90		0.0	2219
-----												
DUNN				DUNN	60.80	D180016		471549	1023713	L	10200	09/01/88
39.70	43.30	43.90	12.80			4.30	1.70	19.60	0.80		0.0	2255

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
GLENHAROLD MINE	34.50	44.60	48.80	MERCER	6.60	65.40	4.50	0.80	471600	1011600	L	10950	09/01/88
									21.60	1.10		0.0	0
GLENHAROLD MINE	28.60	45.80	47.60	MERCER	6.60	65.10	4.50	0.70	471601	1011600	L	10950	09/01/88
									22.00	1.10		0.0	0
GLENHAROLD MINE	26.60	44.30	49.00	MERCER	6.70	65.00	4.60	0.80	471602	1011600	L	10870	09/01/88
									21.70	1.20		0.0	0
GLENHAROLD MINE	31.40	44.50	49.00	MERCER	6.40	65.40	4.70	0.70	471503	1011600	L	10980	09/01/88
									21.60	1.20		0.0	0
	40.10	42.40	46.60	DUNN	11.00	63.10	4.10	1.20	471613	1022911	L	10500	09/01/88
									19.80	0.80		0.0	2165
	38.70	44.90	46.80	MERCER	8.30	65.40	4.60	1.00	471614	1013601	L	11170	09/01/88
									19.60	1.10		0.0	2417
	40.90	43.50	45.00	DUNN	11.50	61.90	4.20	1.70	471615	1023246	L	10350	09/01/88
									19.90	0.80		0.0	2318
	40.00	43.80	41.70	DUNN	12.50	60.90	4.10	2.00	471615	1023470	L	10190	09/01/88
									19.70	0.80		0.0	2381
	33.10	43.60	45.80	MERCER	10.60	62.70	4.50	0.90	471640	1012538	L	10410	09/01/88
									20.30	1.00		0.0	2156
	33.60	42.60	47.80	MERCER	9.60	65.10	4.60	0.90	471657	1014938	L	11160	09/01/88
									18.60	1.20		0.0	2264
	40.50	43.20	46.20	DUNN	10.60	63.10	4.20	1.30	471706	1023323	L	10500	09/01/88
									20.00	0.80		0.0	2219
	37.90	43.00	44.60	DUNN	12.40	61.40	4.20	1.80	471707	1022744	L	10240	09/01/88
									19.20	1.00		0.0	2174
	39.90	42.90	46.30	DUNN	10.80	62.90	4.30	1.20	471707	1023516	L	10500	09/01/88
									20.00	0.80		0.0	2408
	34.60	41.30	40.80	DUNN	17.90	56.80	3.90	2.00	471707	1023750	L	9470	09/01/88
									18.60	0.80		0.0	2156
	46.40	48.70	27.20	DUNN	24.10	48.20	2.90	2.20	471708	1023311	L	7260	09/01/88
									21.70	0.90		0.0	2039
	42.70	42.10	43.60	DUNN	14.30	61.30	4.30	2.40	471711	1023400	L	10310	09/01/88
									17.00	0.70		0.0	2246

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	36.00	44.20	28.00	MERCER	43.70	2.70	3.00	471718	1014822	L	6620	09/01/88
								21.60	1.20		0.0	2156
	42.00	41.90	42.90	DUNN	59.90	4.20	1.20	471732	1023302	L	10120	09/01/88
								18.60	0.90		0.0	2111
	36.10	34.10	34.90	DUNN	47.80	3.40	3.90	471733	1023454	L	8180	09/01/88
								13.60	0.30		0.0	2426
	41.00	43.10	47.70	DUNN	64.10	4.30	0.80	471745	1023015	L	10680	09/01/88
								20.80	0.80		0.0	2147
	43.20	42.80	41.50	DUNN	59.70	4.00	1.80	471745	1023403	L	9860	09/01/88
								18.10	0.70		0.0	2399
	47.00	45.30	44.70	DUNN	64.10	4.50	1.50	471750	1023517	L	10770	09/01/88
								19.10	0.80		0.0	2291
	37.80	44.10	45.60	DUNN	62.00	4.30	1.30	471758	1023645	L	10360	09/01/88
								21.10	1.00		0.0	2264
	28.70	35.20	41.00	MERCER	54.80	3.70	2.50	471759	1014856	L	9360	09/01/88
								14.10	1.10		0.0	2183
	43.10	48.10	43.60	DUNN	65.00	4.80	1.20	471800	1023215	L	11000	09/01/88
								20.00	0.70		0.0	2336
	40.10	43.20	43.60	DUNN	61.00	4.20	3.00	471800	1023322	L	10320	09/01/88
								17.80	0.80		0.0	2264
	45.40	43.20	47.30	DUNN	65.00	4.10	0.50	471803	1023229	L	10810	09/01/88
								20.00	0.90		0.0	2156
	47.40	42.40	45.80	DUNN	63.40	4.20	2.10	471813	1023130	L	10610	09/01/88
								17.20	1.30		0.0	2741
	44.40	44.10	46.20	DUNN	63.60	4.30	1.10	471813	1023442	L	10700	09/01/88
								20.40	0.90		0.0	2507
	43.80	47.80	44.00	DUNN	66.00	4.50	0.90	471822	1023515	L	11090	09/01/88
								19.50	0.90		0.0	2498
	46.60	42.30	46.80	DUNN	63.40	4.30	1.30	471826	1023403	L	10710	09/01/88
								19.20	0.90		0.0	2147
	40.30	43.70	47.10	MERCER	65.00	4.60	2.70	471848	1015137	L	11110	09/01/88
								17.70	0.80		0.0	2156



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Location Moisture	Volatiles	Fixed Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
38.40	42.70	47.10	MERCER	55.00	4.40	1.50	471850 18.10	1015234 0.80	L	10890 0.0	09/01/88 2210
37.90	41.40	47.30	DUNN	62.10	4.00	1.00	471852 20.60	1022743 1.00	L	10330 0.0	09/01/88 2246
44.00	46.80	38.60	DUNN	61.50	4.30	1.80	471852 16.90	1023459 0.90	L	10270 0.0	09/01/88 2381
44.30	47.00	40.60	DUNN	62.20	4.10	2.00	471859 18.40	1023413 0.90	L	10310 0.0	09/01/88 2327
44.70	46.10	45.60	DUNN	66.20	4.60	0.70	471913 19.30	1023516 0.90	L	10960 0.0	09/01/88 2516
39.60	41.20	47.40	MERCER	64.10	4.60	1.50	471914 17.40	1015045 1.00	L	10780 0.0	09/01/88 2156
36.50	41.30	47.50	MERCER	64.10	4.20	1.40	471920 18.20	1015400 0.90	L	10570 0.0	09/01/88 2155
35.70	40.90	44.60	MERCER	61.00	4.30	3.00	471924 15.40	1014940 0.80	L	10420 0.0	09/01/88 2111
27.60	35.90	37.30	MERCER	50.50	3.10	1.70	471940 17.10	1015214 0.80	L	8510 0.0	09/01/88 2093
34.30	40.00	45.80	MERCER	61.10	4.10	1.70	471940 18.10	1015259 0.80	L	10250 0.0	09/01/88 2048
40.30	42.40	45.20	DUNN	61.30	4.10	1.20	471944 20.20	1023400 0.80	L	10210 0.0	09/01/88 2219
40.70	43.70	46.50	DUNN	62.60	4.50	1.20	472034 21.10	1023243 0.80	L	10520 0.0	09/01/88 2318
35.70	42.10	46.40	MERCER	63.20	4.40	1.20	472115 18.90	1015052 0.80	L	10470 0.0	09/01/88 2291
34.50	41.20	47.50	MERCER	63.10	4.20	1.10	472126 19.40	1015225 0.90	L	10360 0.0	09/01/88 2030
36.60	39.90	47.30	MERCER	62.70	4.20	0.50	472215 18.90	1015115 0.90	L	10270 0.0	09/01/88 2129
38.10	42.30	44.90	MERCER	61.60	4.30	1.00	472216 19.30	1015232 1.00	L	10450 0.0	09/01/88 2102

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Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
31.70	39.50	44.80	MERCER	59.60	3.90	0.90	472309	1015145	L	9690	09/01/88
							18.90	1.00		0.0	2129
37.60	40.70	42.20	MCKENZIE	58.60	3.90	2.40	472315	1035145	L	9790	09/01/88
							17.00	1.00		0.0	1967
35.70	40.70	45.50	MERCER	61.80	4.10	2.20	472423	1014335	L	10100	09/01/88
							17.20	0.90		0.0	2192
38.60	40.70	42.90	MCKENZIE	58.70	3.90	3.90	472620	1035730	L	9810	09/01/88
							16.10	1.00		0.0	2057
42.10	43.00	45.40	MCKENZIE	61.30	4.20	1.60	473645	1035505	L	10340	09/01/88
							20.30	1.00		0.0	2120
41.40	42.70	48.90	MCKENZIE	64.60	4.30	0.50	473705	1034640	L	10700	09/01/88
							21.00	1.20		0.0	2129
30.30	35.20	34.00	MCLEAN	49.30	3.80	0.70	473847	1012000	L	8360	09/01/88
							14.30	1.00		0.0	2246
31.20	35.50	33.70	MCLEAN	48.50	4.30	0.60	473853	1013757	L	8110	09/01/88
							14.90	0.90		0.0	2318
41.90	43.20	41.10	MCKENZIE	59.00	4.00	2.10	474450	1025900	L	10140	09/01/88
							18.30	0.90		0.0	1913
41.10	39.40	39.20	MCKENZIE	54.00	3.80	2.20	474745	1025630	L	9070	09/01/88
							17.80	0.80		0.0	1931
40.20	42.10	48.40	MCLEAN	64.10	4.40	0.80	474830	1013805	L	10850	09/01/88
							20.20	1.00		0.0	2183
VELVA STRIP MINE			WARD				475231	1005731	L	10700	09/01/88
37.20	44.10	46.00		63.80	4.60	0.80	19.80	1.10		0.0	0
42.80	42.70	45.60	MCKENZIE	61.80	4.30	0.70	475602	1025510	L	10280	09/01/88
							20.40	1.10		0.0	1913
37.80	43.40	47.80	WARD	64.80	4.30	0.50	480355	1011710	L	10760	09/01/88
							20.30	1.30		0.0	2372
45.10	41.90	45.70	WILLIAMS	61.10	4.30	0.60	481032	1031022	L	10200	09/01/88
							20.60	1.00		0.0	2210
40.80	46.10	39.00	WILLIAMS	58.70	4.00	3.90	481045	1031210	L	9880	09/01/88
							17.80	0.70		0.0	2174

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
43.50	42.60	42.20	42.20	WILLIAMS	15.20	60.40	4.30	2.30	481153	1034754	L	10430	09/01/88
									16.60	1.20		0.0	2183
46.80	43.60	43.70	43.70	WILLIAMS	12.70	62.30	4.30	2.20	481233	1031135	L	10510	09/01/88
									17.60	0.90		0.0	2390
43.00	42.70	46.40	46.40	WILLIAMS	10.90	63.60	4.30	0.70	481335	1030118	L	10550	09/01/88
									19.30	1.20		0.0	2273
44.10	44.30	44.10	44.10	WILLIAMS	11.60	62.80	4.40	2.60	481454	1033103	L	10590	09/01/88
									17.60	1.00		0.0	2444
40.60	41.50	43.60	43.60	WILLIAMS	14.90	60.20	4.10	1.50	481521	1034124	L	10040	09/01/88
									18.30	1.00		0.0	2237
41.70	36.90	40.70	40.70	WILLIAMS	22.40	54.50	3.80	0.60	481525	1033059	L	9060	09/01/88
									17.80	0.90		0.0	2318
43.60	44.80	47.80	47.80	WILLIAMS	7.40	66.80	4.70	0.90	481730	1030750	L	11260	09/01/88
									19.10	1.10		0.0	2543
45.70	40.00	44.70	44.70	WILLIAMS	15.30	60.60	4.10	1.20	481743	1030156	L	10030	09/01/88
									17.80	1.00		0.0	2228
45.30	42.80	50.80	50.80	WILLIAMS	6.40	66.50	4.40	0.40	482031	1030356	L	10800	09/01/88
									21.20	1.10		0.0	2543
24.10	40.60	48.50	48.50	BURKE	10.90	64.60	4.40	0.70	484500	1025230	L	10900	09/01/88
									18.20	1.20		0.0	0
39.20	39.60	45.90	45.90	BURKE	14.50	61.80	4.20	2.00	484825	1023401	L	10580	09/01/88
									16.50	1.00		0.0	2021
36.10	40.70	49.90	49.90	BURKE	9.40	66.30	4.70	0.60	485431	1024825	L	11260	09/01/88
									17.70	1.30		0.0	0

Coal Field Information Printout for

NE - Nebraska

Coal Field Information Printout for: NE - Nebraska

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Lstitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	35.20	45.00	32.30	RICHARDSON	22.70	47.20	D178E27	1.50	400125	952124	B	6840	09/01/88
							2.80		24.40	1.40		0.0	2156
	20.50	39.00	36.20	RICHARDSON	24.80	48.60	D178E26	7.20	400144	953546	B	8310	09/01/88
							3.70		14.30	1.40		0.0	1832
	17.40	40.70	49.90	PAWNEE	9.40	66.70	D175052	5.20	400237	960215	B	11720	09/01/88
							4.70		12.50	1.50		0.5	1949
	35.70	40.60	46.20	JOHNSON	13.20	59.80	D175051	2.20	402025	961120	B	9490	09/01/88
							3.20		20.20	1.40		0.0	2030
HOLE NO RM-1-CS	35.40	41.30	37.20	OTOE	21.50	50.20	D17E540	1.20	403730	960040	B	7790	09/01/88
							3.20		22.80	1.10		0.0	2048
	31.20	36.50	34.90	OTOE	28.60	48.90	D178E25	2.00	403922	954904	B	7920	09/01/88
							3.50		15.80	1.20		0.0	2138

Coal Field Information Printout for

NM - New Mexico

## Coal Field Information Printout for: NM - New Mexico

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
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CAPTAN NO 2 MINE	1.20	29.40	45.40	LINCOLN	25.20	62.00	4.50	D179835	0.50	333300	1033520	B	11180	09/01/88
										6.70	1.10		2.0	2597
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	2.00	37.70	49.90	LINCOLN	12.40	70.90	5.10	D179833	0.60	334345	1054215	B	12690	09/01/88
										9.60	1.40		1.0	2417
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	12.40	41.30	39.00	LINCOLN	19.70	58.40	3.70	D179834	0.70	334350	1054220	B	9650	09/01/88
										16.40	1.10		0.0	2444
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HOT SPOTS MINE	6.60	35.10	58.00	SOCORRO	6.90	71.90	4.60	D179837	0.50	341900	1072420	B	12370	09/01/88
										14.70	1.40		0.0	2291
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	8.40	34.80	29.50	SOCORRO	35.70	45.60	3.10	D184619	0.40	342042	1071525	SB	7480	09/01/88
										14.30	0.90		0.0	2552
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	10.80	38.10	50.20	CATRON	11.70	64.70	4.30	D184617	0.70	343317	1074935	SB	10900	09/01/88
										17.40	1.20		0.0	2804
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SUNDANCE STRIP MINE	9.10	44.10	50.40	MCKINLEY	5.50	74.90	5.50	D183132	0.70	352735	1083815	SB	13330	09/01/88
										12.10	1.30		0.0	2561
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CARBON COAL CO	12.00	43.90	50.10	MCKINLEY	6.00	73.50	5.30	D183133	0.50	353125	1084820	SB	13090	09/01/88
										13.30	1.40		0.0	2255
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	9.60	42.50	47.30	MCKINLEY	10.20	70.30	5.00	D176204	0.60	353732	1085930	SB	12370	09/01/88
										12.70	1.20		3.5	2408
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MCKINLEY STRIP MINE	11.20	42.00	43.50	MCKINLEY	14.50	66.40	4.80	D183130	0.70	353745	1085955	SB	11810	09/01/88
										12.30	1.20		0.0	2714
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	17.40	36.80	47.40	SAN JUAN	16.00	65.40	4.80	D177043	0.60	361413	1080941	SB	11310	09/01/88
										11.70	1.50		0.0	2633
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	17.60	37.50	43.10	SAN JUAN	19.40	61.70	4.40	D178921	0.50	361433	1080820	SB	10830	09/01/88
										12.80	1.20		0.0	2795
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	28.10	34.90	37.00	SAN JUAN	28.10	49.30	3.20	D178919	0.80	361433	1080823	SB	7930	09/01/88
										17.30	1.30		0.0	2687
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	20.40	36.40	46.40	SAN JUAN	17.20	64.10	4.70	D177040	0.50	361438	1080941	SB	11140	09/01/88
										12.10	1.40		0.0	2624
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	21.70	37.80	41.60	SAN JUAN	20.60	60.90	4.60	D177047	0.50	361456	1080823	SB	10650	09/01/88
										12.30	1.10		0.0	2381
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	17.20	38.20	47.50	SAN JUAN	14.30	66.60	4.90	D178928	0.50	361456	1080931	SB	11710	09/01/88
										12.30	1.40		0.0	2408

## Coal Field Information Printout for: NM - New Mexico

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
17.80	40.10	38.20	21.70	SAN JUAN	60.20	4.50	0.70	361505	1080931	SB	10660	0.0	09/01/88 2669
11.00	30.30	29.80	39.90	SAN JUAN	44.40	3.70	1.00	361537	1080931	SB	7830	0.0	09/01/88 2912
SOUTH HOSTEN PIT	11.50	34.20	46.10	SAN JUAN	61.70	4.30	0.60	363530	1082830	SB	10810	0.0	09/01/88 2912
BARBER-MATCHOTT PIT	8.00	36.00	36.00	SAN JUAN	28.00	4.00	0.80	363545	1082900	SB	9590	0.0	09/01/88 2534
SOUTH HOSTEN PIT	9.20	33.50	45.90	SAN JUAN	20.60	4.30	0.60	363610	1082815	SB	10560	0.0	09/01/88 2912
5.70	33.10	41.10	25.80	SAN JUAN	56.70	4.30	0.70	363730	1082230	SB	9950	0.0	09/01/88 0
2.50	32.00	44.60	23.40	COLFAX	63.50	4.50	0.60	364500	1043000	B	11920	0.0	09/01/88 0
2.20	34.00	46.40	19.60	COLFAX	67.20	4.60	0.50	364500	1045230	B	12080	0.0	09/01/88 0
1.50	36.90	55.90	7.20	COLFAX	78.60	5.30	0.40	364500	1055230	SB	14010	0.0	09/01/88 0
6.90	38.90	37.40	23.70	SAN JUAN	56.40	4.00	1.60	364500	1082230	SB	9650	0.0	09/01/88 0
SAN JUAN MINE	4.80	39.20	42.90	SAN JUAN	63.70	4.70	0.90	364600	1082530	SB	11300	0.5	09/01/88 2534
1.80	37.80	54.40	7.80	COLFAX	77.90	5.30	0.40	365230	1045230	B	13910	0.0	09/01/88 0
YORK CANYON MINE	1.70	34.80	50.40	COLFAX	71.40	4.90	0.50	365300	1045500	B	12740	8.0	09/01/88 2363



Coal Field Information Printout for

NV - Nevada

Coal Field Information Printout for: NV - Nevada

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove				Hemi Temp
LEWIS MINE				LYON				D187046		383040	1185450	L	5440	0.0	5440	09/01/88
24.00	45.60	20.50	33.90			33.10	2.90	7.10		22.20	0.80				0.0	2102
PANCAKE MINE				WHITE PINE				D179403		392405	1154015	B	11090	0.0	11090	09/01/88
7.90	34.10	52.50	13.40			65.00	3.80	2.40		14.40	1.00				0.0	2282
PANCAKE MINE				WHITE PINE				D165680		392405	1154021	B	11160	0.0	11160	09/01/88
6.80	33.40	54.30	12.30			66.10	3.90	2.30		14.40	1.00				0.0	0
PARIS MINE				WHITE PINE				D184667		400200	1145400	B	13960	3.0	13960	09/01/88
1.30	20.00	70.30	9.70			79.30	4.30	2.30		2.70	1.70				3.0	2543

Coal Field Information Printout for

OH - Ohio

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
MEIGS NO 1 MINE	2.90	38.80	39.60	21.60	MEIGS	60.40	4.60	6.30	390332	821439	B	11000	09/01/88
									6.20	0.90		1.0	1949
MEIGS NO 3 MINE	4.60	38.60	38.30	23.10	VINTON	59.20	4.50	4.20	390413	822219	B	10550	09/01/88
									8.10	0.90		1.5	2282
MEIGS NO 3 MINE	4.40	43.40	42.50	14.10	VINTON	67.20	5.00	2.80	390414	822218	B	12230	09/01/88
									9.90	1.00		2.0	2282
MEIGS NO 2 MINE	5.40	39.30	45.70	15.00	MEIGS	66.10	5.00	3.10	390829	821734	B	11820	09/01/88
									9.70	1.10		1.5	2156
MEIGS NO 2 MINE	4.70	41.80	46.70	11.50	MEIGS	69.20	5.10	3.10	390829	821736	B	12530	09/01/88
									10.10	1.00		4.0	2147
CORE PPC 1	3.30	40.10	50.20	9.70	WASHINGTON	73.80	5.00	4.40	393408	812011	B	13550	09/01/88
									5.80	1.30		6.0	2138
PPC 3C	3.40	38.20	51.90	9.90	NOBLE	74.20	5.00	3.70	393556	811810	B	13410	09/01/88
									5.90	1.30		5.5	2129
PPC 2C	3.00	35.50	49.90	14.60	NOBLE	70.90	4.80	2.60	393642	811928	B	12710	09/01/88
									5.80	1.30		4.0	2138
R&F COAL, VARGO PIT	8.00	33.30	45.20	21.50	PERRY	60.50	4.00	4.10	393905	820836	B	10750	09/01/88
									8.80	1.10		1.5	2111
SUNNYHILL NO 4 MINE	5.80	32.70	37.80	29.50	PERRY	54.90	3.90	2.20	394040	821102	B	9670	09/01/88
									8.50	1.00		0.5	2651
SUNNYHILL NO 4 MINE	6.40	36.00	41.70	22.30	PERRY	59.10	4.20	6.30	394041	821100	B	10730	09/01/88
									7.00	1.10		1.0	2129
R&F COAL, VARGO PIT	2.60	35.30	41.40	23.30	PERRY	59.50	4.30	2.30	394224	820546	B	10550	09/01/88
									9.50	1.00		1.5	2678
NA COAL CORP, NO 7 MINE	2.00	40.00	46.60	13.40	MONROE	70.10	4.90	4.10	394230	805230	B	12690	09/01/88
									6.30	1.20		7.0	2093
NA COAL CORP, NO 7 MINE	1.00	39.90	48.10	12.00	MONROE	70.10	5.00	4.20	394340	805216	B	12710	09/01/88
									7.50	1.20		7.0	2093
NA COAL CORP, NO 4 MINE	2.00	41.70	47.10	11.20	MONROE	71.60	5.20	5.00	394740	805106	B	12970	09/01/88
									5.80	1.20		7.0	2093
NA COAL CORP, NO 4 MINE	2.00	44.10	46.90	9.00	MONROE	73.90	5.20	3.70	394740	805108	B	13360	09/01/88
									6.90	1.30		7.5	2093

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
NA COAL CORP, NO 1 MINE	2.00	41.90	47.40	MONROE	10.70	72.00	D173518	5.00	395047	805711	B	13020	09/01/88
								4.60	6.50	1.20		5.0	2030
NA COAL CORP, NO 1 MINE	2.00	42.60	47.60	MONROE	9.80	72.50	D173515	5.20	395047	805712	B	13140	09/01/88
								4.70	6.60	1.20		6.5	2048
NA COAL CORP, NO 5 MINE	2.10	43.30	46.10	BELMONT	10.60	71.30	D173517	5.10	395244	805224	B	13050	09/01/88
								5.20	6.60	1.20		6.0	2048
Y & O COAL, ALLISON	2.30	42.20	45.20	BELMONT	12.60	70.50	D173516	4.90	395334	805933	B	12800	09/01/88
								4.90	5.80	1.20		5.0	2048
Y & O COAL, ALLISON	2.20	42.00	48.20	BELMONT	9.80	73.00	D173510	5.00	395339	805934	B	13190	09/01/88
								4.40	6.60	1.20		6.5	2030
NA COAL CORP, NO 6 MINE	2.30	42.40	47.30	BELMONT	10.30	72.50	D173520	5.20	395458	805749	B	13160	09/01/88
								4.70	6.10	1.20		8.0	2039
NA COAL CORP, NO 6 MINE	2.30	42.30	46.90	BELMONT	10.80	71.50	D173521	5.00	395459	805749	B	13020	09/01/88
								5.20	6.20	1.20		5.0	2030
NA COAL CORP NO 3 MINE	1.60	42.60	46.60	BELMONT	10.80	72.10	W187048	5.10	395635	805458	B	13080	09/01/88
								4.60	6.30	1.10		7.0	2039
NA COAL CORP NO 3 MINE	1.80	38.40	49.00	BELMONT	12.60	69.90	W187049	5.00	395636	805505	B	12780	09/01/88
								5.70	5.70	1.10		5.5	2048
BOITCH PIT NO 2	5.00	42.90	53.30	MUSKINGUM	3.80	77.10	W190643	5.50	400050	815544	B	13710	09/01/88
								2.20	10.20	1.20		4.0	1967
R&F COAL, CONE PIT	1.90	37.30	44.70	BELMONT	18.00	64.90	W189065	4.70	400102	810106	B	11740	09/01/88
								3.10	8.10	1.20		4.5	2381
	1.80	39.00	48.70	BELMONT	12.30	70.20	W188929	4.90	400129	811130	B	12610	09/01/88
								3.10	8.20	1.30		5.5	2129
BOITCH PIT NO 1	5.00	44.30	49.00	MUSKINGUM	6.70	71.20	W190645	5.00	400130	815734	B	12890	09/01/88
								5.30	10.70	1.10		3.5	2372
CONSOL COAL CO 46A PIT	2.80	42.90	43.60	BELMONT	13.50	69.10	W188970	4.90	400244	811044	B	12440	09/01/88
								4.60	6.70	1.20		5.0	2084
CONSOL COAL CO MOUNTAINEER	2.80	39.80	50.80	BELMONT	9.40	72.00	W189002	5.00	400250	810507	B	13080	09/01/88
								3.10	8.30	1.20		6.0	2282
R&F COAL, VARGO PIT	2.20	30.20	41.70	BELMONT	28.10	57.00	W189052	3.80	400304	805805	B	10040	09/01/88
								3.00	7.20	0.90		1.0	2417

## Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
SAGINAW MINE				BELMONT									
1.90	38.90	50.90	10.20			71.70	5.10	5.40	400327	805501	B	12970	09/01/88 2003
SAGINAW MINE				BELMONT									
2.00	42.10	50.60	7.30			73.90	5.30	4.00	400327	805502	B	13500	09/01/88 2057
R&F COAL, PIT 414				BELMONT									
2.90	34.90	42.80	22.30			61.60	4.30	2.40	400400	805943	B	11090	09/01/88 2426
FAIRVIEW PIT				GUERNSEY									
2.90	39.40	49.10	11.50			70.20	4.90	3.40	400431	811810	B	12570	09/01/88 2129
DOW MINING, REHM RO PIT				BELMONT									
2.20	32.30	43.70	24.00			60.00	4.50	2.50	400503	805152	B	10840	09/01/88 2741
M&S MINING, BARTON PIT				BELMONT									
1.80	34.80	44.80	20.40			63.60	4.50	2.40	400524	805321	B	11410	09/01/88 2570
R&F COAL, 331 PIT				BELMONT									
1.70	38.90	47.00	14.10			69.20	4.80	2.60	400554	805852	B	12330	09/01/88 2129
CONSOL COAL CO 500				BELMONT									
2.70	43.10	46.70	10.20			70.40	5.10	4.50	400640	811235	B	12930	09/01/88 2084
CONSOL COAL CO 550 PIT				BELMONT									
2.20	47.10	36.60	16.30			65.10	4.80	7.50	400640	811236	B	12020	09/01/88 2030
CONSOL COAL CO FRANKLIN 25				BELMONT									
3.50	40.20	49.50	10.30			71.90	5.00	4.20	400846	810211	B	12920	09/01/88 2084
SIMEO NO 7 MINE				MUSKINGUM									
5.10	48.30	48.30	3.40			77.40	5.50	3.10	400851	815246	B	14040	09/01/88 2003
SIMCO NO 5 MINE				COSHOCTON									
2.70	44.60	48.90	6.50			72.50	5.20	4.40	400905	815004	B	13240	09/01/88 2192
PEABODY-SIMCO SURFACE MINE				MUSKINGUM									
5.30	44.20	45.10	10.70			71.20	5.10	4.10	400909	814442	B	12800	09/01/88 2192
DOW MINING, 250 PIT				BELMONT									
3.70	33.60	44.00	22.40			60.70	4.30	3.30	400949	805012	B	10980	09/01/88 2192
SIMCO NO 5 MINE				COSHOCTON									
4.90	44.70	49.90	5.40			75.20	5.30	3.70	400951	815004	B	13540	09/01/88 2030
R&F COAL, PAGE PIT				HARRISON									
2.40	38.40	50.80	10.80			71.60	5.10	3.00	401003	810032	B	12820	09/01/88 2183

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
R&F COAL, PELTZ-MITCHELL PIT	3.00	36.10	45.70	JEFFERSON	18.20	62.70	4.60	5.30	401008	805100	B	11400	09/01/88
									8.40	0.80		6.0	2084
CONSOL COAL CO 46D PIT	3.00	41.30	47.90	HARRISON	10.80	72.20	5.30	2.90	401018	810145	B	13040	09/01/88
									7.40	1.40		4.0	2245
R&F COAL, VARGO PIT	4.00	36.90	47.60	JEFFERSON	15.50	66.60	4.60	4.80	401020	804517	B	12050	09/01/88
									7.10	1.40		5.0	2084
CONSOL COAL CO 46C PIT	4.00	40.80	49.80	HARRISON	9.40	73.20	5.30	2.10	401020	810405	B	13160	09/01/88
									8.50	1.50		4.0	2390
R&F COAL, GROSCHY PIT	7.30	34.80	45.80	JEFFERSON	19.40	63.10	4.30	1.10	401038	805144	B	11200	09/01/88
									11.00	1.10		0.5	2633
CONSOL COAL CO GEM OF EGYPT	3.10	36.20	53.40	HARRISON	10.40	72.50	4.90	2.00	401041	805838	B	12870	09/01/88
									8.90	1.30		4.0	2534
SIMCO NO 4 MINE	4.40	44.00	48.50	COSHOCTON	6.90	72.10	5.20	3.70	401200	814519	B	13160	09/01/88
									10.70	1.40		4.0	2084
SIMCO NO 4 MINE	4.00	46.70	47.80	COSHOCTON	5.50	73.40	5.50	4.20	401201	814519	B	13400	09/01/88
									10.00	1.40		5.5	2030
BROKEN ARO SURFACE MINE	5.90	40.00	51.90	COSHOCTON	8.10	73.50	5.10	2.80	401430	815904	B	13130	09/01/88
									9.20	1.30		4.0	1958
BROKEN ARO SURFACE MINE	5.70	44.80	44.40	COSHOCTON	10.80	69.70	5.10	5.60	401433	815904	B	12670	09/01/88
									7.60	1.20		4.5	2084
BROKEN ARO SURFACE MINE	5.50	45.00	49.60	COSHOCTON	5.40	75.30	5.10	4.10	401434	815904	B	13540	09/01/88
									8.70	1.40		4.0	2066
CONSOL COAL CO OAK PARK MINE	3.20	38.50	52.20	HARRISON	9.30	73.90	5.00	3.90	401438	810044	B	13160	09/01/88
									6.50	1.40		5.0	2066
CONSOL COAL CO OAK PARK MINE	3.50	40.80	50.50	HARRISON	8.70	74.50	5.20	3.40	401438	810046	B	13520	09/01/88
									6.60	1.50		3.5	2030
CONSOL COAL SILVER SPADE PIT	2.80	38.90	51.50	HARRISON	9.60	71.30	5.00	3.50	401531	810132	B	12980	09/01/88
									9.30	1.30		5.0	2111
CONSOL COAL ROSE VALLEY MINE	3.30	38.80	51.80	HARRISON	9.40	74.50	5.00	3.50	401538	805432	B	13200	09/01/88
									6.20	1.40		6.5	2138
CONSOL COAL ROSE VALLEY MINE	3.10	36.40	53.50	HARRISON	10.10	74.20	5.00	3.10	401539	805437	B	13140	09/01/88
									6.20	1.40		5.0	2183

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Oxygen	Longitude	Rank	Hardgrove	Free Swell	Htg Val	Last Chg
CONSOLE COAL ROSE VALLEY MINE	3.10	36.80	55.00	HARRISON	8.20	75.60	5.00	W188997	2.30	401644	7.40	805432	B		13510	6.0	09/01/88
Y & O COAL, NELMS NO 1 MINE	2.20	41.40	51.30	HARRISON	7.30	76.60	5.30	D173511	2.70	401823	6.70	805402	B		13750	4.5	09/01/88
Y & O COAL, NELMS NO 2 MINE	2.40	38.70	52.00	HARRISON	9.30	74.00	5.30	D173513	3.10	401958	7.10	805500	B		13430	5.5	09/01/88
CONSOLE COAL ROSE VALLEY MINE	2.30	38.90	52.80	JEFFERSON	8.30	73.40	5.10	W188976	3.90	402200	8.00	804928	B		13380	5.5	09/01/88
NA COAL CORP JENSIE MINE	2.00	38.60	47.60	JEFFERSON	13.80	70.20	4.90	W187044	4.60	402608	5.20	804933	B		12650	4.5	09/01/88



Coal Field Information Printout for

OK - Oklahoma

## Coal Field Information Printout for: OK - Oklahoma

Location		County		Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
4.90	21.80	66.00	LE FLORE	77.50	D176244	2.00	340946	944713	B	13240	09/01/88
			12.20		3.00		3.60	1.70		4.5	2147
-----											
HEAVENER MINE			LE FLORE	81.30	D183431	1.00	345252	943650	B	14280	09/01/88
1.00	22.20	69.20	8.60		4.40		3.00	1.70		9.0	2111
-----											
2.90	30.40	46.10	PITTSBURG	61.20	D179904	2.10	345415	953720	B	10980	09/01/88
			23.50		4.20		7.20	1.80		1.5	2732
-----											
STAR NO 3 MINE			PITTSBURG	71.50	D183437	5.90	345834	953657	B	13160	09/01/88
1.90	39.70	49.20	11.10		4.90		5.10	1.50		7.5	2156
-----											
GARLAND MINE			HASKELL	82.10	D183434	1.60	350647	950730	B	14720	09/01/88
2.60	31.60	63.80	4.60		5.00		4.90	1.80		9.0	2066
-----											
1.90	31.10	61.70	HASKELL	79.20	D179909	1.60	350653	951908	B	14100	09/01/88
			7.20		5.10		5.00	1.90		9.0	2039
-----											
3.00	19.00	74.70	LE FLORE	82.30	D176248	2.80	350855	945405	B	14310	09/01/88
			6.30		4.30		2.70	1.60		8.0	2048
-----											
1.20	20.60	75.90	HASKELL	85.70	D179902	0.80	350928	945759	B	15040	09/01/88
			3.50		4.60		3.50	1.90		9.0	2300
-----											
2.80	20.20	76.20	HASKELL	86.30	D176853	0.50	350955	945707	B	14980	09/01/88
			3.60		4.50		3.40	1.70		9.0	2300
-----											
1.00	21.60	75.20	HASKELL	86.70	D176851	0.50	350958	945640	B	15080	09/01/88
			3.20		4.70		3.00	1.90		9.0	2039
-----											
1.60	20.60	76.80	HASKELL	87.30	D179907	0.70	351000	945635	B	15210	09/01/88
			2.60		4.60		3.00	1.80		9.0	2282
-----											
GARLAND NO 10 MINE			LE FLORE	81.60	D176165	1.10	351010	944703	B	13890	09/01/88
3.50	18.80	72.60	8.60		4.20		2.70	1.80		7.5	2354
-----											
1.20	19.50	74.80	HASKELL	84.00	D176848	0.80	351120	950150	B	14490	09/01/88
			5.70		4.30		3.40	1.80		6.0	2093
-----											
KEOTA COAL CO MINE			HASKELL	78.20	D176167	1.60	351258	945700	B	13790	09/01/88
1.80	25.20	64.40	10.40		4.60		3.50	1.70		9.0	2408
-----											
HOYT MINE			HASKELL	77.80	D183424	1.50	351545	951808	B	13940	09/01/88
1.80	28.90	62.60	8.50		5.00		5.30	1.90		2.5	2237
-----											
RIVER VALLEY MINERALS MINE			MUSKOGEE	84.20	D176855	0.40	352135	951635	B	14890	09/01/88
1.90	29.00	67.60	3.40		5.10		4.90	2.00		0.0	2048

Coal Field Information Printout for: OK - Oklahoma

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell				Hemi	Temp
FORUM MINE															
1.00	29.80	61.90	8.30	77.90	4.80	4.50	352318	951355	B	14080	9.0	2219		09/01/88	
P&K POLLYANNA MINE															
6.10	37.40	58.90	3.70	79.40	5.00	1.90	352815	955727	B	14150	3.5	2111		09/01/88	
PORTER MINE															
2.60	39.60	55.50	4.90	78.60	5.40	3.30	355150	953135	B	14390	7.5	2246		09/01/88	
GABLES REDONDA MINE															
2.20	33.60	49.10	17.30	67.70	4.70	4.80	360028	953033	B	12270	4.0	2039		09/01/88	
MCNABB MINE															
1.30	33.30	46.80	19.90	64.30	4.40	5.80	360552	953005	B	11890	5.0	2255		09/01/88	
HEFNER&CO MINE															
4.30	32.10	62.90	5.00	80.20	5.10	0.50	361507	954022	B	14600	0.0	2561		09/01/88	
2.50	37.00	52.60	10.40	71.80	5.06	5.90	363234	952155	B	13270	8.5	2156		09/01/88	
4 STAR COAL AND MINING CO															
5.70	34.40	57.80	7.80	77.70	5.10	0.50	363520	952914	B	13780	3.0	2408		09/01/88	
5.70	35.40	59.50	5.10	79.70	5.30	0.60	363628	952628	B	14300	6.0	2381		09/01/88	
BILLS COAL CO PIT NO 2															
2.70	43.40	51.30	5.30	77.60	5.50	3.40	363934	952645	B	14190	0.0	2318		09/01/88	
2.90	44.50	48.80	6.70	76.30	5.30	3.30	363939	952527	B	14000	8.0	2345		09/01/88	
4 STAR COAL AND MINING CO															
3.20	44.30	48.90	6.80	75.00	5.40	4.80	364130	952208	B	13920	8.0	2201		09/01/88	
3.00	45.80	49.10	5.10	77.90	5.50	3.10	364226	952213	B	14280	9.0	2353		09/01/88	
4 STAR COAL AND MINING CO															
2.80	43.90	50.40	5.70	77.40	5.50	3.30	364325	952640	B	14190	9.0	2156		09/01/88	
2.70	36.40	49.10	14.50	69.80	4.80	4.90	365339	951040	B	12740	8.5	2056		09/01/88	
2.90	35.10	50.40	14.50	70.00	4.80	4.60	365422	951240	B	12760	8.5	2012		09/01/88	

Coal Field Information Printout for: OK - Oklahoma

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BILLS COAL CO PIT NO 5	3.00	35.80	48.20	CRAIG	16.00	68.70	4.70	D183449	4.60	365455	951202	B	12490	09/01/88
										4.70	1.30		8.0	2102
LEONS COAL CO MINE	2.30	35.90	49.00	CRAIG	15.10	68.70	4.80	D183451	6.20	365552	950850	B	12670	09/01/88
										3.90	1.30		8.5	2012
CUSTOM COAL CO MINE	2.90	38.20	53.10	CRAIG	8.70	75.30	5.10	D183444	3.30	365630	950755	B	13780	09/01/88
										6.00	1.60		7.0	2111

Coal Field Information Printout for  
PA - Pennsylvania

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP MINE, KELLEY ENTERPRISE	2.20	36.90	55.10	GREENE	8.00	77.90	5.20	W190575	1.40	394516	795652	B	13910	09/01/88
										5.90	1.60		8.0	2516
STRIP MINE, KELLEY ENTERPRISE	2.30	36.50	54.50	GREENE	9.00	77.10	5.20	W190576	0.70	394517	795652	B	13750	09/01/88
										6.40	1.60		8.5	2912
STRIP MINE, H&E COAL CO	1.70	40.40	47.10	GREENE	12.50	73.20	5.10	W190577	2.40	394540	800028	B	13150	09/01/88
										5.30	1.50		7.0	2516
STRIP MINE, PONTARENO COAL CO	11.00	36.10	54.50	FAYETTE	9.40	70.20	4.20	W190581	1.80	395109	795232	B	11970	09/01/88
										12.90	1.50		0.0	2516
PONTARENO & SONS COAL STRIP	7.00	31.20	50.20	FAYETTE	18.60	64.80	4.20	W189198	1.50	395110	795212	B	11260	09/01/88
										9.70	1.20		0.5	2912
PENN MINERAL CO STRIP MINE	1.40	36.10	50.60	FAYETTE	13.30	71.30	4.90	W189174	4.80	395936	795530	B	12850	09/01/88
										4.20	1.50		8.0	2084
STRIP MINE, PURCO COAL	2.60	28.60	64.40	FAYETTE	7.00	81.50	4.80	W180579	2.10	400307	792703	B	14430	09/01/88
										3.20	1.40		8.5	2245
STRIP MINE, PURCO COAL	2.40	29.00	52.70	FAYETTE	8.30	80.30	4.70	W180580	3.00	400310	792703	B	14220	09/01/88
										2.40	1.30		8.0	2246
STRIP MINE, ETNA EQUIPMENT	4.80	35.10	43.20	WASHINGTON	21.70	63.70	4.40	W190569	2.40	400354	800005	B	11310	09/01/88
										6.50	1.30		5.5	2192
KES ENTERPRISES STRIP MINE	1.20	36.20	47.30	WASHINGTON	16.50	68.10	4.70	W189178	3.40	400628	800450	B	12290	09/01/88
										5.80	1.50		7.0	2156
KES ENTERPRISES STRIP MINE	1.50	37.00	47.30	WASHINGTON	15.70	69.50	4.80	W189177	1.70	400634	800439	B	12500	09/01/88
										6.70	1.60		7.0	2678
STRIP MINE, ETNA EQUIPMENT	2.90	34.00	45.00	WASHINGTON	21.00	64.90	4.40	W190564	2.70	400710	795908	B	11700	09/01/88
										5.70	1.30		7.5	2192
STRIP MINE, TWILIGHT COAL CO	4.70	37.90	42.20	WASHINGTON	19.90	65.70	4.60	W190573	3.50	400846	800256	B	11860	09/01/88
										4.90	1.40		7.0	2245
ALICE ROBINSON STRIP MINE	2.10	29.90	63.20	WESTMORELAND	6.90	81.70	5.00	W189176	1.70	400920	792500	B	14350	09/01/88
										3.30	1.40		9.0	2192
STRIP MINE, TWILIGHT COAL CO	3.10	32.60	46.40	WASHINGTON	21.00	65.00	4.10	W190554	1.40	401013	800308	B	11410	09/01/88
										7.10	1.40		2.0	2192
STRIP MINE	2.00	35.60	54.60	ALLEGHENY	9.80	75.10	5.10	W208B30	2.00	401510	795237	B	13480	09/01/88
										6.30	1.70		9.0	2399

## Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP MINE				ALLEGHENY					W209628	401540	795234	B	13010	09/01/88
2.10	33.80	53.40	12.80			72.30	4.90	2.60		5.90	1.50		8.5	2507
BOGNA MINING CO STRIP MINE				WASHINGTON					W189180	401940	803050	B	9980	09/01/88
3.30	30.80	40.30	28.90			56.10	3.90	3.30		6.60	1.20		3.0	2246
STRIP MINE, PENNWEIR CONST CO				WASHINGTON					W190556	402134	802938	B	10410	09/01/88
2.70	40.00	32.90	27.10			56.70	4.20	5.50		4.40	1.10		4.0	2084
STRIP MINE, PENNWEIR CONST CO				WASHINGTON					W180559	402137	802938	B	10340	09/01/88
3.40	37.20	35.10	27.70			56.70	4.10	4.10		6.30	1.10		5.5	2183
STRIP MINE, N CAMBRIA FUEL				WESTMORELAND					W190591	402139	792411	B	12140	09/01/88
1.10	32.60	47.60	19.80			67.60	4.40	6.00		1.20	1.00		8.0	2129
STRIP MINE, BOGNA MINING CO				WASHINGTON					W190562	402212	801822	B	12560	09/01/88
3.80	39.30	45.80	14.90			70.00	4.90	0.70		8.00	1.50		5.5	2912
MIDWAY COAL CO STRIP MINE				WASHINGTON					W189205	402257	801655	B	13510	09/01/88
2.90	39.00	53.00	8.00			75.10	5.10	2.30		8.10	1.40		6.0	2273
NEW FLORENCE NO 2 MINE				INDIANA					W206999	402258	790628	B	11860	09/01/88
1.90	21.50	55.80	22.70			66.40	4.10	3.90		1.70	1.20		9.0	2201
NEW FLORENCE NO 2 MINE				INDIANA					W206989	402304	790548	B	10770	09/01/88
1.70	19.80	50.60	29.60			60.50	3.80	3.70		1.30	1.10		9.0	2399
NEW FLORENCE NO 2 MINE				INDIANA					W206980	402354	790528	B	11960	09/01/88
2.00	21.10	56.90	22.00			67.40	4.30	2.20		2.90	1.20		9.0	2642
STRIP MINE				ALLEGHENY					W206444	402415	800723	B	13790	09/01/88
2.20	37.50	56.10	6.40			78.60	5.40	1.00		7.20	1.40		8.5	2714
				CAMBRIA					W207300	402446	784832	B	13840	09/01/88
2.90	20.30	68.30	11.40			79.40	4.50	1.60		1.70	1.40		9.0	2246
				CAMBRIA					W207304	402450	784817	B	13980	09/01/88
3.00	19.70	70.10	10.20			80.20	4.50	1.20		2.50	1.40		9.0	2516
				CAMBRIA					W207308	402454	784825	B	13330	09/01/88
2.50	19.10	66.60	14.30			76.00	4.30	0.90		3.10	1.40		9.0	2642
STRIP MINE				ALLEGHENY					W209632	402521	801711	B	12720	09/01/88
3.00	36.50	50.30	13.20			70.60	4.90	2.60		7.30	1.40		5.5	2228
STRIP MINE				ALLEGHENY					W209854	402529	801621	B	13640	09/01/88
2.70	39.00	53.30	7.70			75.40	5.10	2.10		8.20	1.50		5.0	2336

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbm	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Hardgrove	Htg Val	Free Swell	Hemi Temp	Last Chg
STRIP MINE	2.40	37.30	55.70	ALLEGHENY	7.00	77.00	5.10	1.30	402534	801418	B		13750	6.0	2642	09/01/88
STRIP MINE	0.90	21.90	53.00	INDIANA	25.10	65.70	3.60	2.10	402740	790240	B		11440	9.0	2804	09/01/88
HELEN MINE	0.70	26.30	58.60	INDIANA	15.10	72.70	4.50	3.80	402830	791332	B		13020	9.0	2129	09/01/88
HOMER CITY NO 1	0.80	27.30	54.70	INDIANA	18.00	70.30	4.30	3.30	402830	791339	B		12500	8.0	2183	09/01/88
HOMER CITY NO 1	1.00	26.00	60.40	INDIANA	13.60	75.30	4.50	2.40	402850	791304	B		13300	9.0	2237	09/01/88
LUCERNE NO 6	0.90	23.90	61.30	INDIANA	14.80	73.70	4.50	1.80	402852	791251	B		13100	9.0	2354	09/01/88
HELEN MINE	1.70	25.50	60.40	INDIANA	14.10	74.30	4.40	2.60	402853	791252	B		13300	9.0	2228	09/01/88
HELEN MINE	1.20	24.60	58.10	INDIANA	17.30	71.80	4.30	2.40	402908	791406	B		12630	9.0	2273	09/01/88
HOMER CITY NO 1	0.80	26.70	61.70	INDIANA	11.60	77.50	4.60	2.10	402910	791401	B		13550	9.0	2156	09/01/88
HOMER CITY NO 1	1.30	25.80	65.00	INDIANA	9.20	78.00	4.60	2.80	402937	791326	B		13830	9.0	2030	09/01/88
HELEN MINE	1.00	26.00	62.30	INDIANA	11.70	77.10	4.60	1.80	402950	791350	B		13590	9.0	2462	09/01/88
HEAD COAL CO STRIP	2.80	27.70	62.30	INDIANA	10.00	77.90	4.90	2.90	403004	791010	B		13930	9.0	2354	09/01/88
HEAD COAL CO STRIP	3.70	28.60	63.80	INDIANA	7.60	80.20	5.10	0.70	403004	791020	B		14230	9.0	2102	09/01/88
HELEN MINE	1.10	25.90	62.30	INDIANA	11.80	77.60	4.50	0.90	403011	791347	B		13590	9.0	2579	09/01/88
HOMER CITY NO 1	1.30	24.70	62.30	INDIANA	13.00	75.40	4.60	1.50	403013	791247	B		13370	9.0	2390	09/01/88
STRIP MINE	1.10	29.40	57.80	INDIANA	12.80	73.10	4.60	6.40	403030	790720	B		13260	8.5	2111	09/01/88



## Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fixed Carbon	Ash	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
LUCERNE NO 6	0.80	29.00	59.90	11.10	INDIANA	76.80	W197238 4.60	2.20	403031 3.90	791458 1.40	B	13730 9.0	09/01/88 2156
LUCERNE NO 6	0.90	29.10	61.60	9.30	INDIANA	78.90	W196318 4.80	2.00	403033 3.70	791454 1.30	B	14080 7.5	09/01/88 2246
LUCERNE NO 6	1.00	28.50	58.90	12.60	INDIANA	75.50	W196335 4.60	1.90	403046 4.20	791422 1.20	B	13460 8.0	09/01/88 2516
LUCERNE NO 6	1.50	26.30	61.80	11.90	INDIANA	76.40	W196321 4.50	2.00	403052 4.00	791324 1.20	B	13230 8.0	09/01/88 2399
LUCERNE NO 6	0.90	20.60	58.40	21.00	INDIANA	69.20	W197242 3.90	1.00	403105 3.80	791302 1.10	B	12070 3.5	09/01/88 2750
LUCERNE NO 6	1.30	23.00	59.20	17.80	INDIANA	71.10	W196325 4.20	0.70	403105 4.90	791303 1.30	B	12390 8.5	09/01/88 2912
LUCERNE NO 6	1.00	19.40	53.00	27.60	INDIANA	63.00	W196330 3.60	1.00	403107 3.70	791302 1.10	B	11010 1.0	09/01/88 2912
LUCERNE NO 6	1.00	24.60	51.90	23.50	INDIANA	65.30	W197257 4.10	2.30	403235 3.70	791318 1.10	B	11590 8.5	09/01/88 2651
LUCERNE NO 6	0.80	19.50	42.10	38.40	INDIANA	50.70	W196313 3.10	4.50	403240 2.60	791400 0.70	B	9020 1.0	09/01/88 2354
LUCERNE NO 6	1.10	29.20	57.60	13.20	INDIANA	74.90	W197251 4.50	2.40	403254 3.70	791434 1.30	B	13340 9.0	09/01/88 2318
STRIP MINE, BRYAN CONST CO	1.60	38.90	50.90	10.20	ARMSTRONG	75.00	W190583 4.80	4.50	403332 4.00	792559 1.50	B	13630 7.5	09/01/88 2066
	1.60	29.10	59.60	11.30	INDIANA	77.20	D173495 4.90	2.10	403627 3.20	790235 1.30	B	13710 0.0	09/01/88 0
	1.30	28.10	57.20	14.70	INDIANA	71.60	D173459 4.40	7.60	403645 0.50	790332 1.20	B	12950 0.0	09/01/88 0
	2.00	28.40	60.50	11.10	INDIANA	76.80	D173497 4.80	3.50	403647 2.50	790409 1.30	B	13800 0.0	09/01/88 0
	1.70	29.80	59.80	10.40	INDIANA	77.70	D173454 4.70	2.70	403811 3.20	790332 1.30	B	13790 0.0	09/01/88 0
	1.50	31.20	60.40	8.40	INDIANA	80.00	D173493 4.90	2.70	403821 2.60	790341 1.40	B	14470 0.0	09/01/88 0

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
L&E CONSTRUCTION	1.70	33.80	55.70	ARMSTRONG	10.50	75.80	4.80	2.20	404112	791952	B	13600	09/01/88
									5.30	1.40		9.0	2219
STRIP MINE, ROB COAL CO	4.10	38.60	55.50	ARMSTRONG	5.90	79.90	5.20	2.60	404225	793645	B	14290	09/01/88
									4.90	1.50		8.0	2093
FAWN MINE NO 91	2.80	31.80	47.50	BUTLER	20.70	65.40	4.50	1.90	404311	794805	B	11730	09/01/88
									6.20	1.30		8.5	2624
FAWN MINE NO 91	3.10	33.60	50.20	BUTLER	16.20	69.40	5.10	1.70	404314	794853	B	12510	09/01/88
									6.30	1.30		8.5	2597
FAWN MINE NO 91	3.10	31.20	47.90	BUTLER	20.90	66.30	4.60	1.30	404340	794804	B	11760	09/01/88
									5.60	1.30		8.0	2651
COCHRAN&KELLER MINE	1.70	33.20	54.90	ARMSTRONG	11.90	73.80	4.40	1.90	404404	792535	B	13190	09/01/88
									6.60	1.40		9.0	2462
NICHOLSON RUN CO STRIP	1.70	34.70	53.90	ARMSTRONG	11.40	73.60	5.00	2.30	404455	793620	B	13330	09/01/88
									6.40	1.30		7.5	1949
ANDERSON CRK COAL&CLAY STRIP	1.00	22.20	61.30	CLEARFIELD	16.50	69.70	4.10	6.90	404502	782301	B	12520	09/01/88
									1.80	1.00		8.5	2084
ANDERSON CRK COAL&CLAY STRIP	2.70	22.50	58.30	CLEARFIELD	19.20	69.90	4.30	2.20	404506	782307	B	12180	09/01/89
									3.40	1.00		8.5	2669
	1.20	10.00	80.40	NORTHUMBERLAND	9.60	83.10	3.20	0.80	404704	763702	A	13850	09/01/88
									2.00	1.30		0.0	0
	2.00	34.90	51.90	ARMSTRONG	13.20	71.10	5.00	2.80	404715	792930	B	12980	09/01/88
									6.60	1.30		9.0	2354
W HOUSER COAL CO STRIP MINE	2.10	35.10	49.80	ARMSTRONG	15.10	70.80	5.00	1.90	404748	793833	B	12700	09/01/88
									5.90	1.30		8.5	2534
W HOUSER COAL CO STRIP MINE	1.90	35.10	54.00	ARMSTRONG	10.90	74.70	5.10	1.80	404748	793834	B	13340	09/01/88
									6.10	1.40		8.5	2462
BBS SURFACE MINE	1.10	26.60	62.70	INDIANA	10.70	77.70	4.70	0.90	404808	785106	B	13700	09/01/88
									4.60	1.40		8.5	2804
STRIP MINE	1.40	36.80	49.50	ARMSTRONG	13.70	67.50	4.10	6.20	405144	793725	B	12350	09/01/88
									7.50	1.00		8.0	2111
STRIP MINE	1.70	36.70	54.00	ARMSTRONG	9.30	71.90	5.10	4.80	405144	793728	B	13080	09/01/88
									8.00	0.90		8.0	2138

## Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
STRIP MINE, SBP COAL CO	3.30	36.20	54.40	BUTLER	9.40	75.30	5.00	2.10	405158	794644	B	13350	09/01/88
									6.80	1.40		7.5	2192
STRIP MINE	2.60	33.10	52.70	BUTLER	14.20	71.50	4.60	1.30	405220	794820	B	12640	09/01/88
									7.10	1.30		5.0	2723
STRIP MINE	1.50	30.50	53.20	BUTLER	16.30	68.30	4.60	1.40	405535	794525	B	12110	09/01/88
									8.20	1.20		3.5	2732
WEST FREEDOM MINING CO STRIP	2.70	34.20	55.40	BUTLER	10.40	74.20	4.80	1.20	405538	794529	B	13230	09/01/88
									8.00	1.40		6.0	2579
WEST FREEDOM MINING CO STRIP	2.40	34.40	58.80	BUTLER	6.80	76.70	5.00	1.90	405538	794929	B	13700	09/01/88
									8.20	1.40		6.0	2192
BENJAMIN COAL CO STRIP MINE	1.40	26.90	63.60	CLEARFIELD	9.50	79.20	4.80	0.80	405600	783923	B	14010	09/01/88
									4.40	1.50		9.0	2588
SIMCA MINING CO STRIP MINE	0.70	20.40	63.10	CLEARFIELD	16.50	72.10	4.10	5.50	405735	782503	B	12680	09/01/88
									0.80	1.00		9.0	2056
SHALE HILL COAL CO STRIP	1.40	19.00	55.90	CLEARFIELD	25.10	62.90	3.50	4.50	405737	783505	B	11170	09/01/88
									3.10	0.90		7.5	2462
SIMCA MINING CO STRIP MINE	0.70	21.30	62.50	CLEARFIELD	16.20	72.80	4.30	3.30	405738	782504	B	12830	09/01/88
									2.30	1.10		9.0	2426
MCDONALD LAND & MINING STRIP	1.20	25.50	55.50	CLEARFIELD	19.00	69.40	4.20	3.90	410131	783854	B	12190	09/01/88
									2.40	1.10		4.0	2381
MCDONALD LAND & MINING STRIP	2.70	29.70	65.40	CLEARFIELD	4.90	83.00	4.90	1.60	410132	783857	B	14660	09/01/88
									4.40	1.20		8.5	2138
BENJAMIN COAL CO STRIP MINE	1.20	30.00	61.10	CLEARFIELD	8.90	79.60	5.00	1.40	410145	784318	B	14070	09/01/88
									3.90	1.20		8.0	2453
BENJAMIN COAL CO STRIP MINE	3.00	25.80	65.20	CLEARFIELD	9.00	78.10	4.60	2.30	410146	784316	B	13820	09/01/88
									4.70	1.30		9.0	2282
SHAWVILLE COAL CO STRIP MINE	3.30	21.80	59.50	CLEARFIELD	18.70	69.80	4.00	4.60	410212	782338	B	12250	09/01/88
									1.90	1.00		8.0	2183
MCDONALD LAND & MINING STRIP	1.50	26.20	61.00	CLEARFIELD	12.80	75.50	4.40	1.90	410215	783901	B	13250	09/01/88
									4.20	1.20		6.0	2570
MANOR NO 44 MINE	1.70	40.90	45.20	CLEARFIELD	13.90	70.30	5.00	6.70	410514	781709	B	12420	09/01/88
									3.10	1.00		5.0	2048

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	-Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
NASTASI COAL CO STRIP MINE	3.30	38.90	55.10	BUTLER	77.20	5.20	W189189	2.90	410542	794743	B	13740	09/01/88
									7.10	1.60		6.5	2246
NASTASI COAL CO STRIP MINE	2.60	41.50	48.40	BUTLER	74.20	5.40	W189213	2.90	410542	794746	B	13360	09/01/88
									5.90	1.50		7.5	2183
ALVIN GEARHART STRIP MINE	1.70	36.50	53.80	JEFFERSON	75.10	5.10	W189215	1.60	410555	791233	B	13540	09/01/88
									7.00	1.50		8.0	2534
ALVIN GEARHART STRIP MINE	2.70	35.30	61.50	JEFFERSON	81.40	5.30	W189202	1.10	410556	791233	B	14470	09/01/88
									7.40	1.60		7.5	2264
DEEP MINE	4.30	31.20	60.60	JEFFERSON	73.00	4.60	W188856	0.60	410812	785224	B	12500	09/01/88
									12.30	1.30		0.5	2678
STRIP MINE, STAHLMAN COAL CO	1.90	39.30	48.30	JEFFERSON	72.40	4.90	W190587	6.20	410816	791013	B	13180	09/01/88
									3.00	1.10		7.0	2066
LUCAS COAL CO STRIP MINE	1.10	34.20	39.40	BUTLER	56.50	4.30	W189195	7.40	410906	794409	B	10430	09/01/88
									4.40	1.00		4.5	2300
LUCAS COAL CO STRIP MINE	1.90	38.30	56.30	BUTLER	79.00	5.40	W189220	2.40	410906	794410	B	14250	09/01/88
									6.40	1.40		7.0	2138
CLARION REALTY STRIP MINE	2.00	36.20	39.20	VENANGO	56.00	4.00	W190595	13.30	411245	794104	B	10130	09/01/88
									0.30	0.80		5.5	2048
STRIP MINE	1.40	35.30	54.10	ELK	74.60	5.10	W188864	1.90	411706	784628	B	13410	09/01/88
									6.20	1.60		0.0	2174
STRIP MINE	1.00	38.20	53.60	ELK	76.20	5.30	W188863	3.10	411708	784629	B	13790	09/01/88
									5.60	1.60		0.0	2174
STRIP MINE	2.90	31.60	58.20	ELK	74.10	4.70	W188861	0.60	411935	784205	B	12920	09/01/88
									9.30	1.10		0.0	2516
STRIP MINE	1.60	30.60	57.00	ELK	72.50	4.70	W188862	0.50	411937	784204	B	12860	09/01/88
									8.50	1.40		0.0	2912

Coal Field Information Printout for

TN - Tennessee

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ALLEN COAL CO	2.90	28.30	69.20	2.50	MARION	85.30	5.30	0.80	345959	853331	B	15280	09/01/88
									4.50	1.60		9.0	2435
FOUR SEASONS COAL CO	2.10	28.70	62.80	8.50	GRUNDY	77.80	5.10	0.50	351740	854405	B	13650	09/01/88
									6.80	1.30		3.5	2804
PETROLEUMS ENERGY SERV INC	3.50	26.30	64.70	9.00	MARION	78.10	4.70	0.60	351742	853215	B	13750	09/01/88
									6.00	1.60		4.5	2804
PIONEER COAL CO	1.30	32.60	57.40	10.00	BLEDSE	75.90	5.10	2.70	352842	851304	B	13650	09/01/88
									5.20	1.10		7.5	2084
SOUTHERN ENERGY RES CO	4.20	29.10	62.90	8.00	SEQUATCHIE	78.10	4.80	0.60	353012	853212	B	13850	09/01/88
									6.90	1.60		5.0	2804
LUCKY CUMBERLAND COAL CO	1.70	34.50	58.40	7.10	BLEDSE	78.00	5.00	3.40	353014	852219	B	14130	09/01/88
									5.10	1.40		8.5	2165
LAMB CREEK COAL CO	1.60	26.10	54.40	19.50	BLEDSE	68.00	4.30	1.00	353038	852017	B	12060	09/01/88
									5.90	1.30		4.0	2732
SAUNDERS COAL CO	2.00	27.80	64.90	7.30	BLEDSE	79.70	4.90	0.90	353041	852019	B	14140	09/01/88
									5.70	1.50		9.0	2804
STATE PRISON FARM	39.60	39.40	21.00	39.60	LAUDERDALE	42.50	3.80	1.50	353930	894500	L	7640	09/01/88
									12.30	0.30		0.0	2606
JACKSON MINING CO	1.80	35.20	55.00	9.80	ANDERSON	75.10	5.10	2.10	360326	842018	B	13560	09/01/88
									6.10	1.80		4.5	2606
G&B COAL CO	2.40	36.20	60.50	3.30	MORGAN	81.30	5.30	0.60	360618	842510	B	14410	09/01/88
									8.00	1.50		3.0	2444
MOUNTCO COAL CO	2.70	36.30	59.90	3.80	CAMPBELL	80.60	5.20	0.70	360735	842106	B	14390	09/01/88
									8.00	1.70		4.5	2408
DEEP HOLLOW COAL CO	1.70	36.60	58.40	5.00	ANDERSON	80.30	5.30	1.10	360739	841524	B	14190	09/01/88
									6.30	2.00		5.5	2399
LITTLE T COAL CO	4.00	36.80	59.70	3.50	ANDERSON	80.90	5.20	1.00	360821	842122	B	14400	09/01/88
									7.70	1.70		2.5	2284
LITTLE T COAL CO	2.50	34.40	49.70	15.90	ANDERSON	69.50	4.60	0.90	360845	842120	B	12410	09/01/88
									7.70	1.40		3.5	2804
H&B MINING CO	2.50	35.20	61.50	3.30	ANDERSON	81.30	5.40	0.60	360906	841811	B	14500	09/01/88
									7.80	1.60		3.5	2345

## Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbun	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
JJM COAL CO					ANDERSON		W193649		360552	842020	B	14860	09/01/88
2.30	36.60	61.30	2.10	82.90			5.50	0.90	6.50	2.00		5.5	2408
H&W COAL CO					ANDERSON		W188917		361049	842136	B	13340	09/01/88
1.70	37.80	53.60	11.60	73.50			5.20	3.70	7.60	1.40		4.5	2075
PHILLIPS COAL CO					ANDERSON		W193657		361058	841720	B	13880	09/01/88
2.00	33.80	58.30	7.90	77.00			5.30	1.70	6.30	1.80		5.5	2543
CUMBERLAND COAL CORP					ANDERSON		W13658		361106	842416	B	14420	09/01/88
4.60	33.80	63.20	3.00	81.20			5.30	0.80	8.00	1.70		1.5	2444
PREMIUM COAL CO					ANDERSON		W193646		361108	842345	B	14590	09/01/88
2.60	39.70	57.70	2.60	77.10			5.60	0.70	11.80	2.20		4.5	2552
CUMBERLAND COAL CORP					SCOTT		W193659		361125	842355	B	13060	09/01/88
2.30	38.10	49.90	12.00	72.10			5.00	2.90	6.40	1.60		5.0	2354
QUEEN ANNE COAL CO					CAMPBELL		W188958		361138	841501	B	13100	09/01/88
1.70	37.30	51.10	11.60	73.80			5.30	0.70	6.80	1.80		4.5	2552
ALROSHA COAL CO					ANDERSON		W193648		361237	842137	B	11160	09/01/88
2.60	33.70	43.70	22.60	61.10			4.40	5.30	5.30	1.30		3.5	2426
ALROSHA COAL CO					ANDERSON		W193656		361238	842105	B	13580	09/01/88
1.80	35.00	55.80	9.20	74.80			5.30	2.50	6.50	1.70		6.0	2219
EARLICKY COAL CO					CAMPBELL		W188954		361252	842117	B	11490	09/01/88
2.70	33.20	46.70	20.10	66.10			4.30	0.90	7.20	1.40		1.5	2912
JIM POTTER COAL CO					CAMPBELL		W183651		361323	841930	B	12430	09/01/88
0.70	22.30	58.60	19.10	69.20			4.40	4.50	1.60	1.20		9.0	2210
P&M COAL CO					CAMPBELL		W188957		361552	841329	B	13950	09/01/88
3.00	36.80	58.10	5.10	79.20			5.40	0.60	8.20	1.50		1.5	2480
C R LEWIS COAL CO					MORGAN		W188909		361606	843718	B	12810	09/01/88
2.20	34.50	52.20	13.30	71.10			5.10	1.50	7.40	1.60		5.5	2552
MASH INC					SCOTT		W188910		361611	843103	B	11830	09/01/88
2.60	33.50	49.90	16.60	65.50			4.60	4.70	7.50	1.10		1.5	2138
CMC COAL CO					CAMPBELL		W188954		361709	841436	B	12060	09/01/88
1.60	36.70	47.10	16.20	66.40			4.70	3.60	7.60	1.50		4.0	2183
BLACK JEWEL COAL CO					SCOTT		W188915		361922	843450	B	14370	09/01/88
1.50	39.70	54.90	5.40	79.00			5.50	2.70	6.10	1.30		6.5	2291

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Hardgrove	Htg Val	Free Swell	Hemi Temp	Last Chg
P&H EQUIP CO	3.90	36.40	53.60	FENTRESS	10.00	72.60	5.00	W193050	2.90	362405	845556	B		13140	4.5	2525	09/01/88
P&H COAL CO	2.90	32.10	33.50	FENTRESS	34.40	51.50	3.90	W188914	1.60	362507	845856	B		9140	1.0	2912	09/01/88
HELENWOOD EXCAVATING CO	2.20	35.70	59.50	SCOTT	4.80	79.10	5.50	W188908	1.40	362645	843303	B		14090	5.0	2264	09/01/88
P&H EQUIP CO	2.90	34.40	62.60	CAMPBELL	3.00	80.70	5.60	W188902	0.90	362659	840718	B		14220	1.5	2138	09/01/88
LEX MINING CO	3.00	39.40	55.10	CAMPBELL	5.50	76.30	5.50	W188959	2.70	362822	841122	B		13770	5.0	2030	09/01/88
BIG H COAL CO	2.90	39.50	57.80	CAMPBELL	2.70	81.10	5.70	W188960	0.70	362840	841127	B		14370	4.5	2318	09/01/88
DAN BRANCH COAL CO	3.00	39.80	55.70	CAMPBELL	4.50	78.40	5.30	W188963	2.30	362900	841654	B		14020	5.5	2120	09/01/88
DAN BRANCH COAL CO	3.40	35.30	53.10	CAMPBELL	11.60	72.10	4.90	W188962	1.40	362930	841608	B		12740	2.0	2552	09/01/88
FOUR LEAF COAL CO	2.30	38.00	60.40	CLAIBORNE	1.60	82.80	5.60	W193644	0.50	363102	835211	B		14790	5.0	2624	09/01/88
METZLER COAL CO	4.40	34.50	62.60	CAMPBELL	2.90	79.50	5.20	W193660	1.70	363124	840847	B		14200	2.5	2156	09/01/88
JAMES SPUR COAL CO	2.10	34.70	62.50	CLAIBORNE	2.80	81.90	5.50	W193640	0.80	363233	835346	B		14740	5.0	2804	09/01/88
DUPONT SMITH COAL CO	3.60	36.60	60.00	CAMPBELL	3.40	79.60	5.40	W188903	0.90	363235	840327	B		14150	3.0	2354	09/01/88
LONGWA INC	1.90	41.30	50.50	SCOTT	8.20	73.00	5.30	W188907	5.10	363235	842950	B		13430	5.0	2084	09/01/88
BURL LAMBDIN COAL CO	2.50	38.50	58.10	CLAIBORNE	3.40	80.40	5.60	W188901	1.20	363249	835812	B		14380	5.0	2102	09/01/88
THACKER COAL CO	2.40	35.20	62.10	CLAIBORNE	2.70	80.70	5.60	W188918	0.80	363320	835420	B		14520	4.0	2687	09/01/88
M&K COAL CO	2.00	40.30	50.70	CAMPBELL	9.00	72.60	5.00	W188961	4.40	363349	841018	B		13150	4.0	2120	09/01/88



Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SHATTUCK COAL CO	2.20	34.90	61.60	CLAIBORNE	80.50	5.50	1.30	363424	835720	B	14490	09/01/88
								7.90	1.30		6.0	2408
SAM COAL CO	2.40	37.20	60.40	CLAIBORNE	81.30	5.60	0.60	363437	834621	B	14680	09/01/88
								7.90	2.20		3.5	2651
SAM COAL CO	2.20	42.20	56.40	CLAIBORNE	82.50	5.60	0.60	363438	834620	B	14850	09/01/88
								7.90	2.00		5.0	2714
SAM COAL CO	2.20	39.20	59.20	CLAIBORNE	83.30	5.60	0.80	363443	834649	B	14950	09/01/88
								6.80	1.90		4.5	2606
DALE DAUGHERTY COAL CO	2.50	32.50	49.20	SCOTT	65.90	4.50	1.50	363533	841810	B	11800	09/01/88
								8.50	1.30		1.5	2777
ROSS COAL CO	3.00	36.50	58.00	SCOTT	74.00	5.00	5.30	363535	841800	B	13750	09/01/88
								8.70	1.50		3.0	2561

Coal Field Information Printout for

TX - Texas

Coal Field Information Printout for: TX - Texas

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
29.20	44.70	38.40	MILAM	59.10	D177673	4.60	303417	970216	L	10210	09/01/88			2444	
					1.40	4.60	16.70	1.30		0.0					
21.50	45.80	42.70	MILAM	64.30	D177680	4.90	303440	970206	L	11070	09/01/88			2183	
					1.10	4.90	16.90	1.30		0.0					
25.90	48.60	40.50	MILAM	64.50	D177676	5.00	303445	970155	L	11300	09/01/88			2129	
					1.30	5.00	17.10	1.20		0.0					
18.60	49.50	39.40	MILAM	64.10	D177677	5.00	303514	970201	L	11270	09/01/88			2156	
					1.20	5.00	17.40	1.20		0.0					
27.90	44.00	38.40	MILAM	58.80	D177678	4.60	303540	970156	L	10220	09/01/88			2435	
					1.40	4.60	16.50	1.10		0.0					
26.00	46.90	43.20	FREESTONE	64.10	D177683	4.70	314533	960859	L	10990	09/01/88			2111	
					0.90	4.70	19.20	1.20		0.0					
28.50	44.80	42.90	FREESTONE	64.40	D177684	4.70	314545	960917	L	10710	09/01/88			2138	
					0.80	4.70	16.70	1.10		0.0					
27.90	45.50	44.00	FREESTONE	65.00	D177685	4.90	314549	960921	L	11210	09/01/88			2138	
					1.00	4.90	17.50	1.10		0.0					
B-2 PIT 27.90	45.50	44.00	FREESTONE	65.00	D177686	4.90	314645	960936	L	11210	09/01/88			2138	
					1.00	4.90	17.50	1.10		0.0					
B-1 PIT 28.50	44.80	42.90	FREESTONE	64.40	D177687	4.70	314655	961006	L	10710	09/01/88			2138	
					0.80	4.70	16.70	1.10		0.0					
33.10	44.80	45.30	HARRISON	64.40	D177694	4.50	322424	942628	L	11060	09/01/88			1976	
					1.50	4.50	18.80	0.90		0.0					
31.90	42.80	41.30	HARRISON	59.70	D177692	4.30	322425	942627	L	10230	09/01/88			2183	
					1.50	4.30	17.40	1.20		0.0					
31.90	42.80	41.30	HARRISON	59.70	D177696	4.30	322427	942626	L	10230	09/01/88			2183	
					1.50	4.30	17.40	1.20		0.0					
29.60	41.20	35.80	TITUS	55.40	D177690	4.10	331105	950513	L	9450	09/01/88			2210	
					0.70	4.10	15.80	1.00		0.0					
29.60	41.20	35.80	TITUS	55.40	D177688	4.10	331105	950517	L	9450	09/01/88			2210	
					0.70	4.10	15.80	1.00		0.0					

Coal Field Information Printout for

Ut - Utah

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fixed Carbon	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
19.90	42.60	47.00	10.40	68.80	KANE	D169559	4.70	1.70	371500	1121500	B	11910	09/01/88
									13.20	1.20		0.0	0
20.60	40.10	50.60	9.30	68.70	KANE	D169765	4.80	1.10	371500	1122230	B	12000	09/01/88
									14.70	1.40		0.0	0
19.00	36.40	51.90	11.70	68.30	KANE	D183136	4.40	0.60	372220	1122040	B	11730	09/01/88
									13.80	1.20		0.0	2390
23.40	36.70	45.20	18.10	58.90	KANE	D183134	4.30	4.60	372455	1121215	B	10530	09/01/88
									12.90	1.20		0.0	2228
24.40	36.60	39.30	24.10	56.70	GARFIELD	D183137	4.10	0.80	373310	1120910	B	9830	09/01/88
									13.20	1.10		0.0	2804
25.90	36.00	50.20	13.80	65.80	GARFIELD	D183138	4.50	2.20	373320	1120855	B	11440	09/01/88
									12.50	1.20		0.0	2156
14.70	32.10	35.90	32.00	51.50	GARFIELD	D183139	3.80	0.50	375650	1105850	B	9040	09/01/88
									11.10	1.10		0.0	2804
9.50	38.70	50.60	10.70	66.90	GARFIELD	D178173	4.60	0.80	380706	1105758	B	11580	09/01/88
									16.20	0.80		0.0	2174
4.90	35.20	51.20	13.60	65.50	WAYNE	D178172	4.70	2.70	382828	1105440	B	11480	09/01/88
									12.20	1.30		0.0	2120
8.30	37.20	47.80	15.00	65.80	WAYNE	D183141	4.80	1.70	382910	1105430	B	11620	09/01/88
									11.40	1.30		0.0	2678
11.90	39.30	50.80	9.90	67.90	SEVIER	D178166	4.90	2.60	383340	1112705	B	11920	09/01/88
									13.80	0.90		0.0	2030
13.70	29.70	30.50	39.80	43.50	SEVIER	D178169	3.50	0.70	384220	1112800	B	7460	09/01/88
									12.00	0.50		0.0	0
EMERY MINE	3.20	40.70	50.10	9.20	EMERY	D175518	5.10	1.20	384615	1111505	B	12890	09/01/88
									10.30	1.20		1.0	2093
CONVULSION CANYON MINE	7.70	41.80	42.60	15.60	SEVIER	D174676	4.70	0.90	385456	1112500	B	11520	09/01/88
									12.10	1.20		0.0	2246
W AMER ENERGY CORP	5.40	40.80	47.60	11.60	GRAND	D173479	5.10	0.70	390225	1094335	B	12460	09/01/88
									10.80	1.60		0.0	0
4.30	41.00	50.50	8.50	72.00	EMERY	D176980	5.40	0.60	391136	1111310	B	12700	09/01/88
									12.20	1.30		1.0	2192

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.30	45.30	46.70	46.70	EMERY	8.00	73.90	5.90	D176976	0.80	391719	1111420	B	13380	09/01/88
										10.60	0.80		1.0	2111
DESERET MINE				EMERY										
5.20	44.60	48.10	48.10	7.30	74.10	74.10	5.30	D174672	0.50	391905	1110603	B	13210	09/01/88
										11.30	1.50		1.5	2354
DESERET MINE				EMERY										
3.10	43.50	46.70	46.70	9.80	72.10	72.10	5.40	D180000	0.50	391907	1110605	B	13000	09/01/88
										10.80	1.40		1.0	2219
3.50	43.40	48.80	48.80	9.80	72.00	72.00	5.30	D178171	0.50	391910	1110722	B	12910	09/01/88
										11.50	0.90		1.0	2192
WILLBERG MINE				EMERY										
4.60	43.50	48.70	48.70	7.80	73.80	73.80	5.40	D180005	0.50	391925	1110719	B	13270	09/01/88
										11.00	1.50		1.0	2372
3.20	39.70	44.40	44.40	15.90	67.00	67.00	5.10	D178159	0.50	391940	1111126	B	12010	09/01/88
										10.30	1.10		1.5	2543
DEER CREEK MINE				EMERY										
3.70	45.70	48.70	48.70	5.60	78.20	78.20	5.70	D174669	0.50	392125	1110710	B	13780	09/01/88
										10.50	1.50		1.5	2129
3.00	45.40	43.80	43.80	10.80	71.90	71.90	5.70	D178155	0.80	392210	1111320	B	12940	09/01/88
										9.50	1.30		1.0	2453
3.60	43.60	52.70	52.70	3.70	77.00	77.00	5.70	D178149	0.60	392455	1111416	B	13970	09/01/88
										11.90	1.10		2.5	2129
CO-OP MINE				EMERY										
6.10	47.70	46.10	46.10	6.20	76.00	76.00	5.60	D174379	0.50	392505	1110705	B	13750	09/01/88
										10.30	1.40		2.5	2246
GENEVA MINE USSTEEL				EMERY										
5.30	39.60	52.80	52.80	7.60	75.30	75.30	5.20	D173474	1.10	392740	1102112	B	13440	09/01/88
										9.20	1.60		0.0	0
KING MINE				EMERY										
4.80	48.80	44.90	44.90	6.30	74.90	74.90	5.40	D174664	0.50	392750	1110100	B	13530	09/01/88
										11.40	1.50		2.0	2102
STAR POINT NO 1 MINE				CARBON										
5.70	40.40	41.90	41.90	17.70	64.50	64.50	4.80	D174666	0.70	393125	1110245	B	11540	09/01/88
										10.90	1.40		1.5	2408
SUNNYSIDE MINE NO 1				CARBON										
3.00	40.20	54.10	54.10	5.70	77.60	77.60	5.30	D173473	1.20	393540	1102325	B	13780	09/01/88
										8.60	1.60		0.0	0
4.90	47.80	44.40	44.40	7.80	73.50	73.50	5.80	D174663	0.40	394128	1110320	B	13360	09/01/88
										11.00	1.50		1.5	2183
VALLEY CAMP MINE				CARBON										
6.50	49.50	46.50	46.50	4.00	75.70	75.70	5.60	D173472	0.70	394135	1110916	B	13550	09/01/88
										12.40	1.60		0.0	0

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Oxygen	Longitude	Rank	Hardgrove	Free Swell	Htg Val	Last Chg
	2.20	36.90	55.00	CARBON	8.10	74.00	D1769B4	5.10	394201	11.40	1103645	B		12900	1.0	09/01/88
								0.60			0.80					2417
-----																
CARBON FUEL CO NO 3 MINE	2.80	45.20	44.80	CARBON	10.00	72.30	D173476	5.40	394244	10.20	1105351	B		13010	0.0	09/01/88
								0.50			1.50				0.0	0
-----																
	6.70	35.20	43.10	DAGGETT	21.70	56.80	D166185	3.40	405230	16.70	1094500	B		9240	0.0	09/01/88
								0.50			0.90					0

Coal Field Information Printout for  
VA - Virginia



Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE				LEE									
2.20	39.20	51.40	51.40	LEE	9.40	74.30	5.00	4.20	364644	830638	B	13370	09/01/88
									5.70	1.40		3.5	1994
DRILL CORE				LEE									
5.10	34.70	56.50	56.50	LEE	8.80	76.50	5.00	0.70	364905	830008	B	13580	09/01/88
									7.50	1.50		4.0	2804
DRILL CORE				LEE									
2.10	33.60	53.90	53.90	LEE	12.50	73.10	4.90	1.40	364918	825604	B	12950	09/01/88
									6.50	1.60		4.0	2696
DRILL CORE				LEE									
2.90	36.30	58.60	58.60	LEE	5.10	80.90	5.20	0.70	365011	825138	B	14400	09/01/88
									6.50	1.60		5.0	2399
UNDERGROUND MINE				LEE									
4.70	40.60	49.20	49.20	LEE	10.20	72.50	5.10	3.90	365012	825739	B	13200	09/01/88
									6.90	1.40		4.0	2030
DRILL CORE				LEE									
2.50	38.60	58.30	58.30	LEE	3.10	83.20	5.50	0.70	365113	825134	B	14850	09/01/88
									5.70	1.80		7.0	2606
DRILL CORE				SCOTT									
1.40	41.50	48.90	48.90	SCOTT	9.60	73.40	4.90	5.70	365117	823629	B	13560	09/01/88
									5.10	1.30		4.5	1958
SURFACE MINE				LEE									
3.40	37.30	57.90	57.90	LEE	4.80	80.40	5.40	0.60	365159	825533	B	14800	09/01/88
									7.20	1.60		5.5	2851
SURFACE MINE				WISE									
3.60	34.50	55.90	55.90	WISE	9.60	76.60	4.90	0.80	365300	824916	B	13580	09/01/88
									6.60	1.50		5.5	2804
UNDERGROUND				WISE									
3.40	35.50	55.00	55.00	WISE	9.50	76.70	5.20	0.70	365305	825203	B	13680	09/01/88
									6.50	1.40		5.5	2804
UNDERGROUND				WISE									
2.30	38.80	56.60	56.60	WISE	4.60	81.00	5.00	0.60	365331	825212	B	14530	09/01/88
									7.20	1.60		6.0	2804
UNDERGROUND				WISE									
2.00	33.00	50.60	50.60	WISE	16.40	70.80	4.80	0.80	365400	824739	B	12580	09/01/88
									5.70	1.50		6.0	2804
SURFACE MINE				WISE									
2.60	34.80	54.40	54.40	WISE	10.80	74.90	5.00	5.00	365411	822133	B	13700	09/01/88
									3.20	1.10		7.0	2192
SURFACE MINE				WISE									
1.50	33.40	51.40	51.40	WISE	15.20	72.10	4.60	1.20	365411	822140	B	12730	09/01/88
									5.50	1.40		6.0	2300
SURFACE MINE				WISE									
2.20	33.70	56.50	56.50	WISE	9.80	77.40	4.80	0.80	365422	822417	B	13780	09/01/88
									5.80	1.40		7.0	2678
UNDERGROUND				WISE									
1.50	33.60	53.80	53.80	WISE	12.60	74.50	4.90	1.20	365458	824949	B	13330	09/01/88
									5.20	1.60		6.0	2759

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE	3.60	22.20	66.60	WISE	11.20	76.50	4.90	0.90	365506	822054	B	13450	09/01/88
									5.00	1.50		6.5	2507
UNDERGROUND MINE	1.60	32.40	53.40	WISE	14.20	79.40	4.70	1.10	365520	822058	B	13000	09/01/88
									5.10	1.50		6.5	2678
SURFACE MINE	3.00	32.70	57.10	WISE	10.20	76.50	4.80	0.80	365527	822111	B	13530	09/01/88
									6.30	1.40		4.0	2309
SURFACE MINE	1.90	38.30	55.90	WISE	5.80	79.80	5.30	1.60	365542	824108	B	14240	09/01/88
									5.90	1.60		6.5	2183
SURFACE	3.30	32.90	50.60	WISE	16.50	70.60	4.70	0.80	365555	824238	B	12540	09/01/88
									6.10	1.30		6.5	2812
SURFACE MINE	2.80	36.30	60.50	WISE	3.20	83.50	5.30	0.60	365600	824847	B	14890	09/01/88
									5.90	1.50		8.5	2543
UNDERGROUND MINE	1.40	34.20	60.10	WISE	5.70	81.00	5.20	0.60	365615	824913	B	14410	09/01/88
									5.90	1.60		8.5	2804
UNDERGROUND MINE	1.70	32.60	58.20	WISE	9.20	77.70	4.90	0.50	365650	824815	B	13780	09/01/88
									6.20	1.50		8.0	2579
SURFACE	3.00	35.30	55.50	WISE	9.20	76.10	5.00	2.90	365652	824007	B	13800	09/01/88
									5.50	1.30		8.5	2300
SURFACE MINE	3.80	35.00	62.60	WISE	2.40	83.60	5.10	0.90	365653	823620	B	14990	09/01/88
									6.30	1.70		8.5	2156
SURFACE MINE	4.00	33.40	61.00	WISE	5.60	80.90	5.30	0.80	365707	823612	B	14400	09/01/88
									5.70	1.70		8.0	2912
SURFACE MINE	2.40	35.00	60.00	WISE	5.00	81.90	5.40	0.70	365709	823618	B	14700	09/01/88
									5.30	1.70		9.0	2651
UNDERGROUND MINE	1.80	33.20	58.70	WISE	8.10	78.40	5.00	0.80	365709	825023	B	13900	09/01/88
									6.10	1.60		8.0	2777
UNDERGROUND MINE	1.20	35.60	60.00	WISE	4.40	82.30	5.30	0.70	365714	824820	B	14690	09/01/88
									5.70	1.60		8.0	2723
SURFACE MINE	2.30	33.80	57.60	WISE	8.60	77.60	5.20	0.90	365715	823254	B	13920	09/01/88
									6.20	1.50		9.0	2732
SURFACE MINE	3.40	36.20	61.20	WISE	2.60	83.20	5.50	1.10	365715	823258	B	14760	09/01/88
									6.40	1.20		9.0	2129

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	3.70	36.20	58.60	WISE	5.20	79.90	5.50	2.20	365717	823256	B	14390	09/01/88
									5.70	1.50		9.0	2111
SURFACE MINE	3.90	36.20	58.10	WISE	5.70	80.00	5.30	1.10	365719	824217	B	14320	09/01/88
									6.30	1.60		9.0	2651
SURFACE MINE	1.30	38.70	57.10	WISE	4.20	82.10	5.50	0.50	365721	823628	B	14710	09/01/88
									6.00	1.70		6.5	2111
SURFACE	3.80	34.70	53.90	WISE	11.40	75.50	5.20	0.80	365722	824147	B	13500	09/01/88
									5.60	1.50		8.0	2912
SURFACE MINE	3.90	38.60	55.20	WISE	6.20	78.90	5.60	2.70	365723	824104	B	14310	09/01/88
									5.10	1.50		9.0	2219
UNDERGROUND	2.20	36.70	54.40	WISE	8.90	76.70	5.30	0.90	365734	825121	B	13830	09/01/88
									6.50	1.70		5.5	2804
UNDERGROUND MINE	1.20	31.70	54.30	RUSSELL	14.00	73.60	4.60	0.60	365741	821442	B	13000	09/01/88
									5.80	1.40		5.0	2345
SURFACE MINE	2.90	36.10	61.00	WISE	2.90	84.20	5.30	0.90	365759	823555	B	14920	09/01/88
									5.20	1.50		8.0	2237
SURFACE MINE	1.90	37.20	57.20	WISE	5.60	78.90	5.30	3.20	365806	824042	B	14390	09/01/88
									5.60	1.40		9.0	2102
SURFACE	3.90	35.80	57.60	WISE	6.60	80.30	5.20	0.90	365815	822424	B	14290	09/01/88
									5.50	1.50		8.5	2183
SURFACE MINE	3.60	32.60	54.40	WISE	13.00	74.50	4.90	0.90	365818	824139	H	13320	09/01/88
									5.40	1.30		7.5	2804
SURFACE MINE	2.90	34.20	57.40	WISE	8.40	78.30	5.10	0.60	365820	823219	H	14000	09/01/88
									6.10	1.50		9.0	2804
SURFACE MINE	1.30	35.70	57.90	WISE	6.40	80.30	5.60	0.60	365821	823942	B	14420	09/01/88
									5.40	1.70		9.0	2534
SURFACE MINE	1.50	34.00	54.10	WISE	11.90	75.50	5.00	1.20	365822	824017	B	13480	09/01/88
									5.00	1.40		5.5	2669
SURFACE MINE	2.40	30.90	56.40	WISE	12.70	73.20	5.00	2.40	365825	823234	B	13150	09/01/88
									5.30	1.40		8.5	2498
SURFACE MINE	2.00	33.30	59.90	WISE	6.80	79.20	5.20	1.50	365827	823227	B	14180	09/01/88
									5.80	1.50		9.0	2030

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				WISE					365827	823234	B	14300	09/01/88
2.30	33.20	59.80	7.00			77.20	5.30	0.90	7.90	1.70		9.0	2695
SURFACE MINE				WISE					365828	823155	B	14870	09/01/88
2.60	32.80	63.70	3.50			83.40	5.30	0.70	5.60	1.50		8.0	2642
SURFACE MINE				WISE					365832	823926	B	14510	09/01/88
4.30	33.80	61.10	5.10			81.30	5.40	1.10	5.40	1.70		9.0	2605
SURFACE MINE				WISE					365837	823927	B	14140	09/01/88
2.60	35.70	57.80	6.50			78.20	5.10	3.20	5.60	1.40		9.0	2147
UNDERGROUND MINE				WISE					365838	824740	B	13940	09/01/88
1.60	33.10	58.80	8.10			78.70	5.00	0.80	6.00	1.40		8.5	2804
UNDERGROUND MINE				WISE					365841	824655	B	14420	09/01/88
1.80	33.70	61.40	4.90			81.70	5.20	0.70	6.00	1.50		7.5	2642
UNDERGROUND MINE				RUSSELL					365845	821200	B	12710	09/01/88
1.60	28.60	55.00	16.40			72.40	4.50	0.60	4.80	1.30		6.5	2552
SURFACE MINE				WISE					365845	823258	B	14770	09/01/88
3.80	34.10	52.10	3.80			83.00	5.20	0.70	5.60	1.70		8.5	2678
SURFACE MINE				WISE					365849	823229	B	13600	09/01/88
1.80	33.40	54.10	12.50			75.60	4.90	2.00	3.50	1.50		7.0	2426
SURFACE				WISE					365851	822541	B	12840	09/01/88
3.50	32.50	52.00	15.50			71.90	5.00	1.10	4.90	1.60		8.5	2516
SURFACE MINE				WISE					365851	824254	B	13730	09/01/88
2.10	35.20	54.10	10.70			76.70	5.10	0.70	5.40	1.40		8.0	2804
SURFACE MINE				WISE					365854	823157	B	14070	09/01/88
3.10	33.50	58.20	8.30			79.00	5.20	0.60	5.30	1.60		8.0	2750
UNDERGROUND MINE				WISE					365856	825855	B	13440	09/01/88
1.10	34.40	53.90	11.70			75.40	4.80	0.80	5.90	1.40		6.5	2804
SURFACE MINE				WISE					365910	823115	B	14460	09/01/88
3.00	32.50	61.70	5.80			81.30	5.10	1.10	5.20	1.50		7.5	2543
UNDERGROUND				WISE					365910	825003	B	14390	09/01/88
2.90	35.60	59.30	5.10			81.40	5.20	0.60	6.10	1.60		5.0	2804
SURFACE MINE				WISE					365911	823849	B	14570	09/01/88
3.30	35.30	58.10	5.60			81.70	5.20	0.70	5.20	1.60		7.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				WISE									
4.50	30.70	52.30	17.00			69.00	4.60	2.80	365913	823249	B	12430	09/01/88
									5.10	1.50		9.0	2255
UNDERGROUND MINE				RUSSELL									
1.60	32.00	61.80	6.20			82.90	5.00	0.50	365914	821422	B	14580	09/01/88
									4.00	1.40		9.0	2300
SURFACE MINE				WISE									
6.20	34.30	57.60	8.10			79.40	5.20	0.70	365915	823250	B	14210	09/01/88
									5.10	1.50		8.0	2551
SURFACE MINE				WISE									
3.90	33.50	54.30	2.20			84.50	5.60	0.50	365916	823252	B	15080	09/01/88
									5.50	1.70		8.0	2534
UNDERGROUND MINE				WISE									
1.80	37.40	58.40	4.20			81.40	5.30	0.70	365917	824823	B	14450	09/01/88
									6.70	1.70		5.0	2678
SURFACE MINE				WISE									
2.80	32.50	65.20	2.30			85.00	5.30	1.30	365918	823104	B	15070	09/01/88
									4.60	1.50		8.0	2030
UNDERGROUND MINE				WISE									
1.50	34.90	60.80	4.30			82.60	5.30	0.70	365918	824708	B	14640	09/01/88
									5.60	1.50		7.5	2633
SURFACE MINE				WISE									
1.70	34.40	54.20	11.40			74.10	4.90	5.30	365925	823324	B	13560	09/01/88
									2.70	1.60		9.0	2201
SURFACE MINE				WISE									
2.30	33.80	59.90	6.30			80.20	5.20	2.60	365928	823323	B	14450	09/01/88
									3.90	1.80		9.0	2120
SURFACE MINE				WISE									
2.60	32.30	63.80	3.90			82.60	5.20	1.20	365929	823034	B	14750	09/01/88
									5.50	1.60		9.0	2111
SURFACE MINE				WISE									
3.90	35.40	57.30	6.30			79.50	5.20	3.10	365931	823032	B	14330	09/01/88
									4.90	1.00		9.0	2210
SURFACE MINE				WISE									
5.50	32.80	61.40	5.80			81.60	5.20	0.60	365932	823325	B	14620	09/01/88
									5.10	1.70		8.5	2660
SURFACE MINE				RUSSELL									
2.30	30.60	51.80	17.60			70.80	4.70	1.00	365933	820945	B	12650	09/01/88
									4.60	1.30		0.0	2804
SURFACE MINE				WISE									
1.40	34.60	61.60	3.80			82.70	5.30	0.60	365933	822839	B	14810	09/01/88
									6.10	1.50		8.5	2597
SURFACE MINE				WISE									
3.50	35.60	60.70	3.70			82.00	5.40	1.10	365935	823056	B	14610	09/01/88
									6.60	1.20		9.0	2147
UNDERGROUND MINE				WISE									
1.50	35.20	61.20	3.60			82.90	5.30	0.50	365936	824706	B	14660	09/01/88
									6.20	1.50		8.5	2543

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	2.40	28.60	51.60	RUSSELL	68.90	4.60	W192606	365941	821106	B	12260	09/01/88
						0.80		4.50	1.40		7.5	2507
UNDERGROUND MINE	1.50	34.20	61.90	WISE	82.70	5.10	W225109	365943	823942	B	14760	09/01/88
						0.80		5.70	1.80		8.5	2624
UNDERGROUND	3.50	34.70	58.30	WISE	79.10	5.00	W204163	365946	824930	B	13910	09/01/88
						0.60		6.60	1.70		4.5	2723
SURFACE MINE	4.20	32.20	51.10	WISE	81.00	5.00	W229550	365951	823333	B	14410	09/01/88
						0.90		4.80	1.60		8.5	2633
SURFACE MINE	2.90	33.20	55.10	WISE	74.40	4.80	W191135	365955	823516	B	13420	09/01/88
						2.90		4.70	1.50		7.5	2264
SURFACE MINE	2.90	30.80	59.90	WISE	78.00	5.20	W192602	365956	823516	B	13910	09/01/88
						0.80		5.20	1.50		8.0	2804
SURFACE	2.70	32.20	53.00	WISE	82.60	5.10	W204157	365957	822952	B	14580	09/01/88
						0.80		5.10	1.60		9.0	2759
UNDERGROUND MINE	1.80	29.70	57.90	RUSSELL	76.60	4.80	W192709	370001	821107	B	13510	09/01/88
						0.60		4.30	1.30		0.0	2381
UNDERGROUND MINE	1.90	34.10	56.10	DICKENSON	76.90	5.20	W210394	370005	821937	B	13860	09/01/88
						1.80		4.90	1.40		8.5	2093
SURFACE MINE	11.00	31.70	60.80	WISE	77.40	4.80	W192591	370007	823531	B	13490	09/01/88
						1.00		7.70	1.60		2.0	2399
SURFACE MINE	6.40	33.30	63.70	WISE	83.80	5.30	W191136	370009	823531	B	14930	09/01/88
						0.70		5.60	1.60		9.0	2912
SURFACE MINE	1.50	34.00	55.40	WISE	74.60	4.90	W191334	370012	823245	B	13490	09/01/88
						4.50		4.20	1.20		9.0	2201
UNDERGROUND MINE	2.80	32.00	57.70	WISE	77.00	4.90	W231H31	370014	823400	B	13770	09/01/88
						1.00		5.20	1.60		8.5	2273
SURFACE MINE	2.40	26.00	49.50	DICKENSON	54.60	4.20	W192704	370016	822552	B	11420	09/01/88
						0.70		4.60	1.40		9.0	2489
UNDERGROUND MINE	3.00	35.90	56.80	DICKENSON	77.30	5.20	W210395	370018	822003	B	14180	09/01/88
						4.20		4.60	1.40		8.5	2048
SURFACE	2.20	35.30	57.70	WISE	79.30	5.20	W204164	370021	824719	B	13990	09/01/88
						0.70		6.20	1.60		5.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE	1.60	30.50	54.00	DICKENSON	15.50	73.40	W210398	4.70	370022	822017	B	13060	09/01/88
								0.80	4.20	1.40		7.5	2381
UNDERGROUND MINE	2.00	32.40	58.40	DICKENSON	9.20	78.70	W209963	5.30	370028	821848	B	13900	09/01/88
								0.70	4.70	1.40		8.0	2354
SURFACE MINE	1.20	34.60	60.90	WISE	4.50	82.00	W225108	5.10	370029	823948	B	14740	09/01/88
								0.80	5.80	1.80		7.5	2804
	1.20	31.60	58.90	RUSSELL	9.50	79.00	D161632	5.00	370045	821037	B	13950	09/01/88
								0.70	4.40	1.40		0.0	0
UNDERGROUND MINE	1.30	45.10	47.90	DICKENSON	7.00	81.10	W210391	5.10	370045	821844	B	14460	09/01/88
								0.80	4.40	1.80		8.0	2219
SURFACE MINE	3.60	38.20	55.90	WISE	5.90	80.10	W195441	5.50	370045	824250	B	14400	09/01/88
								0.80	6.00	1.70		8.5	2804
SURFACE MINE	3.90	31.50	63.20	WISE	5.30	81.90	W192703	5.30	370046	823328	B	14630	09/01/88
								0.90	4.80	1.80		9.0	2804
SURFACE MINE	6.00	30.00	60.70	WISE	8.30	76.40	W192613	4.80	370048	823321	B	13630	09/01/88
								3.50	4.40	1.60		9.0	2084
UNDERGROUND MINE	2.00	32.30	61.30	DICKENSON	6.40	81.50	W208959	5.00	370050	822556	B	14530	09/01/88
								0.60	5.00	1.50		8.0	2579
SURFACE MINE	1.90	33.80	62.70	WISE	3.50	83.70	W223356	5.20	370052	823908	B	14900	09/01/88
								0.80	5.10	1.70		8.5	2768
SURFACE MINE	3.40	33.90	51.60	WISE	14.50	72.50	W195443	5.00	370057	824248	B	12950	09/01/88
								1.20	5.40	1.40		8.5	2804
UNDERGROUND MINE	2.60	23.20	46.40	RUSSELL	30.40	59.80	W192707	3.80	370100	820952	B	10470	09/01/88
								0.50	4.30	1.20		5.0	2777
SURFACE MINE	3.70	32.10	59.20	DICKENSON	8.70	77.90	W209960	5.50	370104	822724	B	13990	09/01/88
								1.00	5.30	1.60		8.5	2281
SURFACE	3.30	33.70	62.60	DICKENSON	3.70	84.60	W204160	5.20	370108	821814	B	14960	09/01/88
								0.60	4.30	1.60		8.0	2246
SURFACE MINE	3.20	34.10	62.60	WISE	3.30	83.70	W229076	5.20	370111	823348	B	14930	09/01/88
								0.80	5.30	1.70		8.5	2543
SURFACE MINE	6.90	32.70	63.50	WISE	3.80	84.20	W229075	5.20	370116	823218	B	14910	09/01/88
								0.60	4.60	1.60		8.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrog	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.00	31.10	56.10	12.80	RUSSELL		74.00	4.50	D161836	0.50	370120	821129	B	13100	09/01/88
										6.70	1.30		0.0	0
SURFACE MINE				DICKENSON										
2.70	33.70	63.00	3.30			82.20	5.40	W192612	1.10	370131	821527	B	14710	09/01/88
										6.50	1.50		8.5	2246
UNDERGROUND MINE				DICKENSON										
1.50	33.50	51.30	15.10			71.70	4.90	W210401	2.20	370133	821252	B	13030	09/01/88
										4.80	1.30		7.5	2489
UNDERGROUND MINE				DICKENSON										
3.80	33.50	59.70	6.80			80.70	5.70	W210402	0.80	370135	821239	B	14470	09/01/88
										4.40	1.60		6.0	2507
UNDERGROUND MINE				BUCHANAN										
1.80	30.80	65.00	4.20			83.90	5.00	W217594	0.80	370137	820834	B	14800	09/01/88
										4.70	1.40		8.5	2471
SURFACE MINE				RUSSELL										
4.50	28.60	62.50	8.90			78.20	4.80	W192607	0.70	370140	820819	B	13770	09/01/88
										6.10	1.30		8.0	2515
UNDERGROUND MINE				DICKENSON										
3.30	44.40	33.20	22.40			66.90	4.30	W210399	0.70	370140	822031	B	11620	09/01/88
										4.50	1.20		7.0	2696
UNDERGROUND MINE				BUCHANAN										
1.80	32.30	58.70	9.00			78.40	5.00	W217597	0.80	370141	820803	B	13920	09/01/88
										5.30	1.50		7.5	2417
SURFACE MINE				DICKENSON										
4.30	31.80	63.60	4.60			83.40	5.40	W195444	1.00	370142	822816	B	14900	09/01/88
										3.80	1.80		9.0	2255
UNDERGROUND MINE				DICKENSON										
2.40	31.20	61.50	7.30			80.80	5.30	W210400	0.80	370143	821611	B	14420	09/01/88
										4.30	1.50		8.0	2210
13.00	29.00	58.80	12.20	RUSSELL		67.80	3.50	D161627	0.60	370145	820828	B	11080	09/01/88
										14.80	1.10		0.0	0
1.40	33.10	57.30	9.50	RUSSELL		77.50	5.00	D161634	0.50	370145	821054	B	13720	09/01/88
										6.00	1.40		0.0	0
SURFACE MINE				WISE										
4.40	28.80	62.20	9.00			78.40	4.80	W192592	1.00	370147	823536	B	14020	09/01/88
										5.00	1.80		8.5	2786
1.10	31.20	62.80	6.00	RUSSELL		82.40	5.00	D161626	0.80	370149	820840	B	14550	09/01/88
										4.50	1.30		0.0	0
UNDERGROUND MINE				DICKENSON										
2.00	30.20	60.50	9.30			78.50	5.10	W210393	1.00	370149	822008	B	14100	09/01/88
										4.60	1.50		8.5	2471
SURFACE MINE				WISE										
2.30	31.10	62.60	6.30			81.30	4.80	W197300	0.80	370149	823425	B	14490	09/01/88
										5.30	1.50		9.0	2912



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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE				WISE								
2.20	33.50	53.50	13.00		73.20	4.90	4.60	370149	823740	B	13330	09/01/88
								2.90	1.40		8.0	2147
SURFACE MINE				WISE								
2.70	32.90	55.20	11.90		74.60	4.80	2.50	370151	823534	B	13390	09/01/88
								5.30	0.90		8.5	2498
UNDERGROUND MINE				WISE								
2.10	35.00	52.90	12.10		74.30	5.00	1.30	370154	824358	B	13240	09/01/88
								5.60	1.70		7.0	2696
SURFACE MINE				WISE								
3.90	35.70	53.40	10.90		74.80	5.00	3.40	370155	823519	B	13510	09/01/88
								4.70	1.20		8.5	2273
SURFACE MINE				WISE								
4.10	31.50	60.60	7.90		79.40	5.30	0.90	370156	823519	B	14170	09/01/88
								4.80	1.70		8.5	2588
SURFACE MINE				WISE								
3.50	32.00	50.40	17.60		69.40	4.60	0.80	370202	824347	B	12300	09/01/88
								6.10	1.50		5.0	2804
SURFACE MINE				DICKENSON								
2.60	28.70	63.50	7.80		80.40	5.00	1.20	370215	822853	B	14360	09/01/88
								4.00	1.60		9.0	2860
UNDERGROUND MINE				DICKENSON								
2.20	29.00	59.50	11.50		75.80	4.90	1.10	370218	821723	B	13580	09/01/88
								5.20	1.40		7.5	2480
KISER RIDGE STRIP MINE				DICKENSON								
1.80	34.00	63.10	2.90		83.20	5.30	1.10	370220	821455	B	14770	09/01/88
								5.80	1.70		0.0	0
KISER RIDGE STRIP MINE				DICKENSON								
1.90	32.20	58.60	9.20		78.80	4.90	0.80	370220	821457	B	13930	09/01/88
								4.70	1.60		0.0	0
UNDERGROUND MINE				DICKENSON								
2.50	28.90	57.90	13.20		74.70	4.70	1.10	370220	821834	B	13330	09/01/88
								4.90	1.40		7.0	2678
SURFACE MINE				DICKENSON								
2.10	34.00	62.50	3.50		83.10	5.30	0.80	370221	821431	B	14730	09/01/88
								5.70	1.60		8.5	2426
SURFACE MINE				WISE								
5.50	35.70	57.70	6.60		79.40	5.20	1.30	370224	824223	B	14010	09/01/88
								6.00	1.50		4.5	2417
				DICKENSON								
1.40	32.30	59.30	8.40		80.00	5.00	0.50	370228	821122	B	14010	09/01/88
								4.70	1.40		0.0	0
SURFACE MINE				WISE								
1.40	38.40	59.10	2.50		84.60	5.40	0.80	370233	824114	B	15120	09/01/88
								5.20	1.50		5.0	2534
UNDERGROUND MINE				WISE								
3.80	31.60	60.40	8.00		78.90	4.90	2.30	370239	823340	B	14180	09/01/88
								4.20	1.70		8.0	2543

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE	2.80	29.60	59.80	DICKENSON	10.60	78.40	4.90	0.90	370246	822858	B	13920	09/01/88
									3.90	1.30		8.0	2912
SURFACE MINE	5.60	35.00	60.60	WISE	4.40	80.40	5.20	1.90	370248	824105	B	14360	09/01/88
									6.80	1.30		8.0	2084
SURFACE MINE	1.10	37.70	58.90	WISE	3.40	83.40	5.30	0.80	370254	824113	B	14910	09/01/88
									5.60	1.50		4.5	2741
UNDERGROUND MINE	1.60	32.40	62.80	DICKENSON	4.80	83.20	5.20	0.80	370257	821158	B	14790	09/01/88
									4.30	1.70		7.0	2417
SURFACE MINE	2.20	29.60	54.40	DICKENSON	16.00	72.50	4.70	0.60	370259	821436	B	12840	09/01/88
									4.80	1.40		7.5	2804
SURFACE	4.00	26.70	59.30	DICKENSON	14.00	75.10	4.50	0.80	370303	820922	B	13270	09/01/88
									4.30	1.50		8.0	2804
	4.90	34.00	60.40	WISE	5.60	80.40	5.30	1.70	370306	823800	B	14420	09/01/88
									5.80	1.20		9.0	2399
SURFACE MINE	4.30	37.40	59.60	WISE	3.00	83.40	5.50	0.90	370307	823759	B	14930	09/01/88
									6.10	1.10		9.0	2588
UNDERGROUND MINE	2.20	29.20	54.70	WISE	16.10	71.70	4.40	0.70	370308	823711	B	12710	09/01/88
									5.90	1.20		8.0	2804
DEEP MINE	3.20	33.80	49.30	RUSSELL	16.90	69.60	4.30	0.70	370311	815906	B	12420	09/01/88
									7.40	1.10		2.5	2750
SURFACE MINE	1.70	34.30	56.40	WISE	9.30	77.80	5.00	1.10	370313	823855	B	13860	09/01/88
									5.40	1.40		8.0	2804
SURFACE MINE	1.80	26.30	56.80	DICKENSON	16.90	73.00	4.50	0.60	370318	822153	B	12960	09/01/88
									3.60	1.40		9.0	2615
SURFACE MINE	3.40	32.70	61.70	WISE	5.60	80.90	5.10	1.60	370319	823246	B	14620	09/01/88
									5.40	1.40		8.5	2417
SURFACE	3.10	33.60	55.40	WISE	11.00	75.80	5.10	2.10	370327	823829	B	13620	09/01/88
									5.60	0.40		8.5	2552
UNDERGROUND MINE	3.30	26.50	57.60	DICKENSON	15.90	73.30	4.40	0.80	370328	820827	B	12940	09/01/88
									4.40	1.20		8.5	2624
UNDERGROUND MINE	2.40	31.00	64.60	WISE	4.40	82.80	5.00	0.70	370332	823303	B	14740	09/01/88
									5.40	1.70		8.5	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				DICKENSON				W19H543		370336	822724	B	14420	09/01/88
4.10	30.40	62.40	7.20			81.80	4.90	0.70		3.80	1.60		6.5	2912
UNDERGROUND MINE				DICKENSON				W211170		370337	821317	B	11490	09/01/88
2.00	23.40	51.50	25.10			84.90	4.00	0.50		4.30	1.20		8.0	2669
UNDERGROUND MINE				WISE				W223354		370345	824028	B	14300	09/01/88
1.90	34.20	59.40	6.40			80.50	5.20	1.10		5.40	1.40		8.0	2624
SURFACE MINE				WISE				W229080		370401	824210	B	14390	09/01/88
1.70	38.30	55.70	6.00			79.80	5.30	2.50		4.90	1.50		6.5	2030
SURFACE MINE				WISE				W226976		370404	823728	B	12570	09/01/88
17.70	33.50	60.60	5.90			75.00	4.20	0.70		12.50	1.70		0.0	2318
SURFACE MINE				WISE				W226977		370404	823730	B	13980	09/01/88
1.80	32.50	58.50	9.00			78.30	5.10	0.90		5.00	1.70		7.5	2804
SURFACE MINE				RUSSELL				W193935		370411	815845	B	12800	09/01/88
3.30	29.00	55.40	15.60			72.80	4.50	1.70		4.40	1.00		5.5	2642
2.20	37.20	57.70	5.10			82.00	5.10	0.80		370421	815655	B	14580	09/01/88
SURFACE MINE				WISE				W23H482		370421	823206	B	15230	09/01/88
2.30	32.50	65.00	2.50			85.40	5.30	0.60		4.60	1.60		7.5	2804
UNDERGROUND MINE				DICKENSON				W211169		370424	820945	B	12440	09/01/88
1.80	23.80	57.60	18.60			71.30	4.30	0.60		4.00	1.20		9.0	2678
UNDERGROUND MINE				WISE				W213994		370426	823145	B	14450	09/01/88
2.20	30.90	63.20	5.90			81.70	4.40	0.80		5.60	1.60		8.5	2804
UNDERGROUND MINE				DICKENSON				W197308		370429	821001	B	13950	09/01/88
2.60	25.60	64.70	9.70			80.60	4.50	0.70		3.00	1.50		9.0	2354
UNDERGROUND MINE				WISE				W213995		370429	823146	B	14500	09/01/88
2.00	31.70	62.60	5.70			81.00	4.80	0.90		6.00	1.60		9.0	2732
SURFACE MINE				WISE				W229549		370445	823118	B	15340	09/01/88
6.00	33.80	64.90	1.30			86.40	5.40	0.80		4.40	1.60		9.0	2417
DEEP MINE, H COAL CO				RUSSELL				W187056		370447	815550	B	14160	09/01/88
11.50	37.90	57.60	4.50			80.60	5.10	0.50		7.90	1.40		0.5	2138
UNDERGROUND MINE				DICKENSON				W211171		370452	821331	B	11370	09/01/88
1.50	20.10	54.40	25.50			65.10	3.90	0.60		3.80	1.10		7.5	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE				BUCHANAN									
2.30	34.10	61.80	4.10			82.00	5.10	1.00	370457	820204	B	14810	09/01/88
									6.10	1.70		8.0	2237
SURFACE MINE				WISE									
2.60	32.20	54.90	12.90			74.10	4.80	2.50	370503	823519	B	13230	09/01/88
									3.90	1.80		8.0	2372
SURFACE MINE				DICKENSON									
3.90	31.10	64.10	4.80			83.50	5.30	0.90	370506	822536	B	14780	09/01/88
									3.80	1.70		9.0	2597
SURFACE MINE				DICKENSON									
2.50	19.20	49.10	31.70			59.20	3.60	0.80	370508	821308	B	10330	09/01/88
									3.70	1.00		7.5	2804
2.80	35.00	56.50	8.50	RUSSELL					370509	815419	B	14010	09/01/88
									5.40	1.50		7.0	2462
SURFACE MINE				WISE									
1.80	30.80	54.50	14.70			71.70	4.70	3.40	370510	823519	B	12940	09/01/88
									3.80	1.70		6.5	2219
1.60	34.00	59.30	6.70	RUSSELL					370519	815755	B	14310	09/01/88
									5.20	1.40		8.0	2462
SURFACE MINE				WISE									
4.10	32.70	63.70	3.60			84.10	5.20	0.70	370519	823524	B	15020	09/01/88
									4.70	1.70		8.5	2777
2.50	35.40	56.30	8.30	RUSSELL					370524	815449	B	13910	09/01/88
									5.80	1.40		6.5	2408
DEEP MINE, MCGALL COAL CO				RUSSELL									
1.50	36.90	55.80	7.30			80.10	5.10	0.60	370526	815415	B	14120	09/01/88
									5.40	1.50		7.5	2516
3.30	35.30	57.90	6.80	RUSSELL					370526	815417	B	14120	09/01/88
									6.10	1.70		6.5	2462
SURFACE MINE				WISE									
2.60	34.70	58.70	6.60			78.80	5.20	2.80	370527	823711	B	14220	09/01/88
									5.10	1.50		9.0	2039
SURFACE MINE				WISE									
3.10	35.80	57.60	6.60			79.30	5.20	2.50	370528	823844	B	14370	09/01/88
									5.00	1.40		8.0	2264
1.30	35.70	56.60	7.70	RUSSELL					370535	815439	B	14180	09/01/88
									6.10	1.60		0.0	0
SURFACE MINE				WISE									
3.40	33.10	64.20	2.70			83.70	5.20	0.70	370543	823514	B	15080	09/01/88
									6.10	1.60		8.5	2732
SURFACE MINE				DICKENSON									
3.00	32.60	65.00	2.40			84.40	5.30	1.00	370554	823013	B	15040	09/01/88
									5.30	1.60		9.0	2579

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Location		County				Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp						
1.60	33.20	62.70	4.10	83.20	D168910	0.80	370559	815820	B	14810	0.0					09/01/88	
DEEP MINE, HESS CREEK MIN CO																	
2.40	28.30	49.80	21.90	66.40	W187055	2.30	370620	815748	B	11720	4.5					09/01/88	
SURFACE MINE																	
2.30	34.20	61.00	4.80	80.90	W192611	2.90	370620	823050	B	14610	9.0					09/01/88	
SURFACE MINE																	
1.60	32.90	60.20	6.90	80.30	D170136	1.70	370632	815842	B	14310	8.5					09/01/88	
SURFACE MINE																	
2.70	35.00	57.40	7.60	78.90	W229073	0.90	370648	823727	B	14100	8.0					09/01/88	
SURFACE MINE																	
2.50	32.70	60.20	7.10	81.20	W183945	0.70	370702	815912	B	14460	8.5					09/01/88	
UNDERGROUND MINE																	
2.50	19.60	50.10	30.30	59.80	W211172	1.50	370719	821346	B	10670	8.0					09/01/88	
SURFACE MINE																	
4.00	33.00	62.10	4.90	80.60	W212487	0.90	370725	822757	B	14150	7.5					09/01/88	
UNDERGROUND MINE																	
1.40	21.10	56.00	22.90	65.40	W211158	0.80	370748	821449	B	11860	8.0					09/01/88	
SURFACE																	
3.90	35.10	60.00	4.90	82.20	W203392	0.80	370749	822804	B	14710	8.0					09/01/88	
SURFACE																	
3.00	28.90	62.00	9.10	79.30	D170145	0.90	370800	814444	B	14080	9.0					09/01/88	
SURFACE																	
2.60	30.00	64.60	5.40	82.80	D170144	1.40	370812	814447	B	14660	9.0					09/01/88	
SURFACE																	
2.70	24.50	55.80	19.70	68.20	W191031	0.70	370814	814324	B	11980	1.0					09/01/88	
UNDERGROUND MINE																	
1.70	28.90	66.40	4.70	83.90	W217592	0.70	370823	815951	B	14790	8.0					09/01/88	
SURFACE MINE																	
2.10	31.60	63.10	5.30	81.70	W212486	0.70	370836	822953	B	14380	3.5					09/01/88	
SURFACE																	
2.80	28.20	68.30	3.50	84.20	D170143	2.00	370838	814230	B	14880	9.0					09/01/88	

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE				DICKENSON										
0.90	23.00	56.10	20.90			69.10	4.20	0.60	W215414	370842	821951	B	12070	09/01/88
										4.00	1.20		6.0	2804
SURFACE MINE				WISE										
2.50	37.20	57.60	5.20			79.60	5.20	2.00	W212489	370842	823336	B	14360	09/01/88
										6.20	1.80		5.5	2111
3.70	35.60	53.70	10.70	WISE										
						75.10	5.10	1.40	W219265	370845	823740	B	13470	09/01/88
										6.10	1.60		6.5	2642
2.00	27.10	69.60	3.30	TAZEWELL										
						85.30	5.00	0.90	D170162	370858	814726	B	15010	09/01/88
										3.90	1.60		9.0	2138
SURFACE MINE				DICKENSON										
8.90	37.40	54.00	8.60			76.70	5.40	2.90	W209961	370904	823238	B	13930	09/01/88
										4.80	1.60		8.0	2120
DRILLCORE				WISE										
2.90	35.30	59.90	4.80			81.80	5.10	0.60	W219405	370904	823625	B	14550	09/01/88
										6.10	1.60		7.0	2804
SURFACE MINE				DICKENSON										
9.40	31.60	62.10	6.30			76.00	4.50	0.80	W229084	370915	822807	B	13180	09/01/88
										10.80	1.60		0.5	2480
2.90	31.30	62.00	6.70	BUCHANAN										
						81.30	4.90	0.60	D170139	370917	815412	B	14370	09/01/88
										5.00	1.50		6.5	2624
SURFACE MINE				WISE										
1.80	32.20	53.60	14.20			73.10	4.60	0.70	W212490	370918	823259	B	13010	09/01/88
										5.80	1.60		6.5	2804
SURFACE MINE				DICKENSON										
4.50	34.10	58.70	7.20			79.90	5.10	1.50	W23083	370919	322808	B	14270	09/01/88
										4.70	1.60		7.5	2516
1.90	27.30	68.40	4.30	TAZEWELL										
						84.10	4.90	1.20	D170163	370924	814704	B	14840	09/01/88
										4.00	1.50		9.0	2138
3.60	29.80	66.30	3.90	TAZEWELL										
						84.90	5.00	0.50	D170140	370937	815131	B	14990	09/01/88
										4.40	1.30		8.5	2093
UNDERGROUND MINE				BUCHANAN										
2.60	26.60	66.00	7.40			82.20	4.80	0.90	W215875	370947	820738	B	14440	09/01/88
										3.20	1.50		7.5	2642
UNDERGROUND MINE				BUCHANAN										
3.10	26.00	69.20	4.80			84.20	4.80	0.80	W215876	370951	820027	B	14880	09/01/88
										3.80	1.60		8.0	2318
UNDERGROUND MINE				BUCHANAN										
1.20	18.50	69.10	12.40			79.70	3.90	0.70	W214764	370955	820101	B	13690	09/01/88
										2.20	1.10		7.5	2498
SURFACE				DICKENSON										
4.00	36.00	60.30	3.70			83.10	5.60	0.90	W204617	371003	822840	B	14860	09/01/88
										4.90	1.80		7.0	2363

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	3.70	35.80	57.60	DICKENSON	6.60	79.40	5.70	1.70	371003	822903	B	14270	09/01/88
									4.80	1.80		8.0	2543
UNDERGROUND MINE	3.40	26.20	69.30	BUCHANAN	4.50	84.90	5.00	0.80	371004	820026	B	14980	09/01/88
									3.10	1.70		8.0	2282
UNDERGROUND MINE	2.10	38.80	56.20	DICKENSON	5.00	80.60	5.40	1.30	371004	823111	B	14580	09/01/88
									5.80	1.90		7.0	2291
	2.30	27.30	65.30	TAZEWELL	7.40	81.40	4.80	0.70	371012	814754	B	14330	09/01/88
									4.40	1.30		8.5	2912
UNDERGROUND MINE	1.30	25.30	60.70	BUCHANAN	14.00	75.50	4.50	3.00	371012	820737	B	13570	09/01/88
									1.60	1.40		6.0	2363
SURFACE MINE	1.70	25.50	57.20	BUCHANAN	17.30	72.70	4.50	1.00	371023	820556	B	12910	09/01/88
									3.20	1.30		8.0	2804
	1.90	28.50	68.40	BUCHANAN	3.10	85.70	5.10	0.80	371029	815248	B	15080	09/01/88
									3.90	1.40		9.0	2138
	2.60	31.00	65.70	TAZEWELL	3.30	85.30	5.10	0.90	371030	815026	B	15080	09/01/88
									3.90	1.50		9.0	2300
SURFACE MINE	3.80	35.90	62.20	DICKENSON	1.90	85.50	5.40	0.70	371032	822656	B	15240	09/01/88
									4.90	1.60		7.5	2390
SURFACE MINE	2.00	35.80	60.50	BUCHANAN	3.70	82.90	5.30	1.00	371035	822639	B	14850	09/01/88
									5.30	1.80		7.0	2606
SURFACE	3.90	32.90	59.80	DICKENSON	7.30	79.40	5.10	0.80	371036	822537	B	14150	09/01/88
									5.80	1.60		9.0	2804
	2.00	27.10	68.70	BUCHANAN	4.20	85.50	4.90	0.70	371039	815048	B	14990	09/01/88
									3.40	1.30		8.0	2084
SURFACE MINE	4.00	34.60	58.80	DICKENSON	6.60	80.00	5.40	1.40	371040	822548	B	14370	09/01/88
									4.70	1.90		9.0	2624
SURFACE MINE	3.40	34.90	61.10	DICKENSON	4.00	82.30	5.60	1.70	371042	822549	B	14830	09/01/88
									4.50	1.90		9.0	2309
UNDERGROUND MINE	1.70	25.20	71.70	BUCHANAN	3.10	86.40	4.70	1.00	371043	820100	B	15140	09/01/88
									3.10	1.70		8.0	2399
	2.20	26.70	70.70	BUCHANAN	2.60	86.90	5.00	0.50	371049	815206	B	15260	09/01/88
									3.70	1.30		9.0	2039

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE				BUCHANAN									
1.10	19.00	70.90	10.10	BUCHANAN		80.60	4.10	0.80	371050	820431	B	14050	09/01/88 2480
DRILLCORE				DICKENSON									
2.40	39.90	54.00	6.10	DICKENSON		77.90	5.30	2.80	371115	823241	B	14070	09/01/88 2039
UNDERGROUND MINE				BUCHANAN									
2.90	24.80	64.40	10.80	BUCHANAN		78.80	4.60	1.40	371116	820634	B	13830	09/01/88 2606
3.40	27.40	68.90	3.70	BUCHANAN		86.40	5.00	0.70	371118	815049	B	15140	09/01/88 2156
UNDERGROUND MINE				BUCHANAN									
1.30	24.90	54.40	20.70	BUCHANAN		69.50	4.00	0.60	371126	820643	B	12200	09/01/88 2804
3.40	26.00	67.50	6.50	TAZEWELL		83.70	4.70	0.90	371130	814134	B	14700	09/01/88 2462
3.20	28.10	62.80	9.30	TAZEWELL		78.90	4.60	2.70	371131	814550	B	13980	09/01/88 2111
SURFACE MINE				BUCHANAN									
2.70	25.70	70.90	3.40	BUCHANAN		85.90	4.90	0.60	371135	815215	B	15160	09/01/88 2354
8.10	28.10	64.70	7.20	TAZEWELL		78.80	4.20	1.00	371137	814541	B	13500	09/01/88 2264
2.90	27.60	66.70	5.70	TAZEWELL		83.70	4.90	0.90	371140	814544	B	14720	09/01/88 2462
2.30	24.00	68.60	7.40	BUCHANAN		82.60	4.50	0.70	371141	815030	B	14500	09/01/88 2462
3.80	24.80	71.20	4.00	BUCHANAN		85.60	4.90	2.10	371141	815114	B	15000	09/01/88 2183
SURFACE MINE				BUCHANAN									
4.50	29.80	61.90	8.30	BUCHANAN		80.70	4.90	1.00	371148	820831	B	14430	09/01/88 2804
SURFACE MINE				BUCHANAN									
5.90	29.40	54.80	15.80	BUCHANAN		72.30	4.50	1.60	371149	820842	B	13000	09/01/88 2453
SURFACE MINE				DICKENSON									
2.70	30.30	57.40	12.30	DICKENSON		75.00	4.70	2.30	371150	821554	B	13390	09/01/88 2336
SURFACE MINE				DICKENSON									
2.70	31.20	57.50	11.30	DICKENSON		75.40	4.80	2.90	371151	821555	B	13490	09/01/88 2363



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Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
6.40	20.20	72.80	TAZEWELL	82.60	W191030	0.60	371155	813913	B	14100	09/01/88				
					4.30		4.00	1.60		1.0	2138				
SURFACE MINE			BUCHANAN	76.70	W193950	1.30	371206	815739	B	13550	09/01/88				
7.00	25.10	62.70			4.40		4.10	1.30		9.0	2489				
SURFACE MINE			BUCHANAN	82.20	W193948	1.70	371208	815737	B	14570	09/01/88				
3.40	25.90	67.10			4.70		3.10	1.30		9.0	2417				
UNDERGROUND MINE			BUCHANAN	86.10	W214763	0.60	371212	815949	B	14740	09/01/88				
1.60	18.30	76.10			4.30		2.30	1.10		2.5	2309				
SURFACE MINE			TAZEWELL	83.10	W191033	1.00	371215	814102	B	14780	09/01/88				
1.40	23.70	71.00			4.90		4.40	1.30		9.0	2237				
SURFACE MINE			TAZEWELL	85.30	W191032	0.80	371219	814112	B	15110	09/01/88				
1.80	24.40	72.10			4.80		4.20	1.40		9.0	2264				
UNDERGROUND MINE			BUCHANAN	87.10	W215412	0.70	371258	815939	B	15340	09/01/88				
1.20	23.70	73.50			4.80		3.00	1.60		9.0	2516				
DRILLCORE			DICKENSON	81.30	W219405	0.80	371302	822858	B	14440	09/01/88				
2.90	37.40	58.20			5.20		6.70	1.60		5.5	2804				
SURFACE MINE			BUCHANAN	82.90	W193947	0.70	371305	815430	B	14600	09/01/88				
4.60	24.20	69.30			4.80		3.60	1.50		9.0	2804				
UNDERGROUND MINE			BUCHANAN	75.70	W193935	0.90	371315	820536	B	12990	09/01/88				
1.20	15.50	68.30			3.90		2.30	1.00		4.5	2804				
UNDERGROUND MINE			BUCHANAN	83.90	W217397	0.70	371316	820652	B	14780	09/01/88				
1.30	24.40	70.00			4.80		3.40	1.60		9.0	2327				
SURFACE MINE			BUCHANAN	77.70	W238474	1.00	371319	820859	B	13860	09/01/88				
2.40	29.10	59.90			4.90		3.90	1.50		8.0	2786				
SURFACE MINE			BUCHANAN	81.90	W238475	1.00	371320	820855	B	14340	09/01/88				
8.20	29.90	66.40			4.90		6.90	1.60		2.5	2084				
UNDERGROUND MINE			BUCHANAN	81.80	W217399	1.50	371323	820827	B	14620	09/01/88				
1.30	31.20	63.00			5.10		4.50	1.30		8.5	2030				
SURFACE MINE			BUCHANAN	86.20	D170149	0.50	371325	815238	B	15080	09/01/88				
1.90	23.10	72.70			4.80		3.00	1.30		9.0	2363				
UNDERGROUND MINE			BUCHANAN	84.40	W193933	0.60	371346	815946	B	14550	09/01/88				
0.90	15.70	76.70			4.20		2.10	1.10		3.5	2426				

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	2.80	30.80	61.00	BUCHANAN	8.40	79.90	5.10	W194298	1.20	371349	820807	B	14270	09/01/88
										3.90	1.50		9.0	2842
SURFACE MINE	2.50	25.90	54.30	BUCHANAN	19.80	59.90	4.30	W194300	0.70	371349	820809	B	12410	09/01/88
										4.00	1.30		6.5	2804
SURFACE MINE	1.60	32.20	55.80	DICKENSON	12.00	74.20	4.80	W235240	3.70	371355	821933	B	13400	09/01/88
										3.90	1.40		9.0	2156
UNDERGROUND MINE	0.80	17.70	69.80	BUCHANAN	12.50	79.10	3.90	W193934	0.90	371357	820428	H	13580	09/01/88
										2.60	1.00		5.5	2309
UNDERGROUND MINE	1.60	20.60	75.10	BUCHANAN	4.30	86.50	4.50	W214755	0.60	371358	820614	H	14900	09/01/88
										2.90	1.20		5.0	2210
SURFACE MINE	5.10	27.00	51.90	BUCHANAN	21.10	67.70	4.30	W194302	1.30	371358	820723	H	12060	09/01/88
										4.30	1.30		9.0	2804
SURFACE MINE	4.10	22.40	44.50	BUCHANAN	33.10	56.90	3.60	W194303	1.40	371359	820721	B	10110	09/01/88
										4.00	1.00		8.5	2615
SURFACE MINE	2.30	26.40	57.10	BUCHANAN	16.50	73.10	4.50	W194292	1.00	371400	820720	H	13010	09/01/88
										3.50	1.40		8.5	2804
SURFACE MINE	1.80	33.70	63.40	DICKENSON	2.90	83.60	5.20	W235241	0.80	371404	821938	B	15000	09/01/88
										5.90	1.60		8.0	2597
	2.50	19.40	69.60	BUCHANAN	11.00	79.90	4.10	D170158	0.90	371407	815028	B	13870	09/01/88
										2.80	1.30		8.5	2912
	3.10	20.10	71.30	BUCHANAN	6.60	81.80	4.40	D170157	0.60	371418	814930	B	14230	09/01/88
										3.20	1.40		9.0	2912
	1.70	25.50	66.10	TAZEWELL	8.40	81.20	4.70	D170151	0.50	371420	812859	B	14230	09/01/88
										3.90	1.30		8.5	2912
	0.90	28.10	68.00	TAZEWELL	3.90	86.20	4.90	D170150	0.50	371422	812909	B	15140	09/01/88
										3.10	1.40		7.0	2471
UNDERGROUND MINE	2.80	32.00	57.60	DICKENSON	10.40	77.10	4.90	W211675	0.60	371427	822038	B	13590	09/01/88
										5.50	1.50		7.5	2804
UNDERGROUND MINE	2.30	29.60	54.00	DICKENSON	16.40	71.60	4.70	W211677	0.80	371429	822027	H	12930	09/01/88
										4.90	1.60		7.5	2651
UNDERGROUND MINE	2.80	28.10	61.90	BUCHANAN	10.00	77.80	4.70	W211771	2.10	371433	820904	B	13840	09/01/88
										3.90	1.50		6.5	2462

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Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
LESLIE COAL CO MINE	3.00	25.90	64.90	9.20	TAZEWELL	81.10	4.60	0.60	371434	812940	B	14210	09/01/88
									3.10	1.40		8.0	2912
SURFACE MINE	13.20	26.10	60.10	13.80	BUCHANAN	69.10	4.00	0.60	371434	820954	B	11520	09/01/88
									11.10	1.40		0.0	2723
UNDERGROUND MINE	3.10	32.10	65.60	2.30	BUCHANAN	84.60	4.80	1.40	371436	820926	B	15160	09/01/88
									5.10	1.80		9.0	2102
UNDERGROUND MINE	1.40	18.30	78.00	3.70	BUCHANAN	87.00	4.20	0.70	371437	820136	B	14990	09/01/88
									3.20	1.20		3.5	2336
SURFACE MINE	2.20	31.40	65.60	3.00	BUCHANAN	84.60	5.30	1.20	371439	820949	B	15090	09/01/88
									4.30	1.60		8.0	2201
					BUCHANAN	81.90	4.40	0.70	371440	815050	B	14210	09/01/88
									2.80	1.40		9.0	2732
CONSOL LAUREL NO 2 MINE	2.10	26.80	63.60	9.60	TAZEWELL	80.10	4.70	0.80	371445	812802	B	14150	09/01/88
									3.40	1.40		7.0	2732
UNDERGROUND MINE	1.50	17.90	77.70	4.40	BUCHANAN	86.30	4.20	0.70	371448	815713	B	14960	09/01/88
									3.20	1.20		3.0	2381
					BUCHANAN	79.70	4.20	0.80	371449	815022	B	13750	09/01/88
									3.70	1.40		2.5	2912
					TAZEWELL	82.70	4.40	0.50	371450	812958	B	14240	09/01/88
									3.60	1.10		9.0	2408
UNDERGROUND MINE	1.60	27.50	66.70	5.80	BUCHANAN	82.20	4.70	1.20	371453	820847	B	14410	09/01/88
									4.60	1.50		6.0	2714
					BUCHANAN	88.10	4.50	0.60	371500	814802	B	15310	09/01/88
									2.90	1.40		9.0	2111
UNDERGROUND	1.90	21.30	68.90	9.80	TAZEWELL	80.90	4.50	0.60	371501	812909	B	14180	09/01/88
									3.00	1.20		9.0	2507
UNDERGROUND	2.00	22.10	69.30	8.60	TAZEWELL	82.10	4.60	0.70	371502	812954	B	14340	09/01/88
									2.80	1.20		9.0	2471
SURFACE MINE	2.50	31.80	61.30	6.90	BUCHANAN	80.70	5.20	1.50	371503	821054	B	14390	09/01/88
									4.30	1.40		9.0	2444
					TAZEWELL	71.00	4.90	1.10	371515	812959	B	15030	09/01/88
									3.20	1.20		9.0	2237

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE				BUCHANAN									
3.60	24.20	46.50	29.30			60.80	3.80	0.60	371519	821011	B	10690	09/01/88
									4.40	1.10		4.5	2804
UNDERGROUND MINE				BUCHANAN									
2.60	30.00	61.30	8.70			79.20	5.00	1.20	371529	820811	B	14100	09/01/88
									4.30	1.60		8.5	2210
SURFACE MINE				BUCHANAN									
2.50	28.30	68.70	3.00			84.70	5.00	0.90	371536	820713	B	15100	09/01/88
									5.00	1.40		9.0	2255
SURFACE MINE				BUCHANAN									
2.40	26.50	52.80	20.70			68.50	4.30	0.60	371548	820713	B	12210	09/01/88
									4.70	1.20		8.0	2804
AUGER MINE, LAUREL FORK				TAZEWELL									
2.80	27.60	68.00	4.40			84.50	4.90	0.80	371600	812645	B	14850	09/01/88
									4.20	1.20		9.0	2408
UNDERGROUND MINE				BUCHANAN									
1.60	27.90	67.10	5.00			82.90	4.90	0.60	371615	821112	B	14600	09/01/88
									4.90	1.70		8.0	2777
				BUCHANAN									
2.00	20.70	72.70	6.60			83.60	4.40	0.60	371617	815332	B	14540	09/01/88
									3.40	1.40		9.0	2912
SURFACE MINE				BUCHANAN									
3.60	29.10	61.90	9.00			78.60	5.00	1.50	371638	821025	B	14040	09/01/88
									4.30	1.60		8.5	2588
SURFACE MINE				BUCHANAN									
2.00	36.30	56.60	7.10			79.30	5.30	2.70	371717	821520	B	14400	09/01/88
									4.00	1.60		6.0	2021
SURFACE MINE				BUCHANAN									
1.90	35.90	51.60	12.50			73.40	4.90	4.00	371746	821502	B	13370	09/01/88
									3.80	-40		8.5	2138
UNDERGROUND MINE				BUCHANAN									
1.40	29.80	59.10	11.10			77.20	4.80	1.60	371748	820808	B	13670	09/01/88
									3.80	1.50		6.0	2824
UNDERGROUND MINE				BUCHANAN									
2.60	29.90	62.30	7.80			80.10	5.00	1.20	371805	820002	B	14210	09/01/88
									4.20	1.70		8.5	2480
				BUCHANAN									
3.00	22.30	74.60	3.10			87.70	4.70	0.60	371813	814504	B	15250	09/01/88
									2.50	1.40		9.0	2237
DRILLCORE				MONTGOMERY									
4.90	10.20	51.00	38.80			52.70	2.60	0.30	371817	801930	B	8750	09/01/88
									5.00	0.60		0.0	2804
UNDERGROUND MINE				BUCHANAN									
1.60	28.50	65.30	6.20			81.50	5.10	1.10	371821	820108	B	14530	09/01/88
									4.40	1.70		9.0	2588
UNDERGROUND MINE				BUCHANAN									
1.70	32.30	59.90	7.80			79.60	5.00	1.00	371822	821327	B	14180	09/01/88
									5.00	1.60		9.0	2660

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE	1.50	34.20	59.70	BUCHANAN	6.10	81.10	5.10	1.30	371823	821329	B	14440	09/01/88
									4.70	1.70		7.0	2498
UNDERGROUND MINE	2.70	31.80	61.50	BUCHANAN	6.70	80.10	4.90	1.20	371824	820546	B	14500	09/01/88
									5.40	1.70		8.0	2606
SURFACE MINE	2.90	34.00	63.90	BUCHANAN	2.10	85.20	5.10	1.10	371833	821218	B	15250	09/01/88
									4.80	1.70		8.0	2228
UNDERGROUND MINE	2.00	32.90	60.30	BUCHANAN	6.80	80.30	5.10	0.60	371848	821309	B	14350	09/01/88
									5.70	1.50		8.5	2804
SURFACE MINE	1.60	31.80	65.10	BUCHANAN	3.10	84.50	5.20	0.70	371813	820349	B	15040	09/01/88
									4.80	1.70		8.5	2660
UNDERGROUND MINE	2.40	29.70	52.00	BUCHANAN	18.30	69.60	4.50	0.80	371826	820617	B	12520	09/01/88
									5.40	1.40		6.5	2804
SURFACE MINE	3.50	29.70	55.40	BUCHANAN	14.90	72.70	4.90	0.70	372000	820549	B	12900	09/01/88
									5.30	1.50		8.0	2804
UNDERGROUND MINE	2.50	33.10	61.50	BUCHANAN	5.40	81.60	5.10	1.70	372006	820608	B	14550	09/01/88
									4.60	1.60		8.0	2192
UNDERGROUND MINE	1.50	30.00	61.40	BUCHANAN	8.60	79.00	4.90	0.70	372010	820210	B	14040	09/01/88
									5.20	1.60		8.0	2651
UNDERGROUND MINE	2.20	31.50	62.10	BUCHANAN	6.40	81.30	4.60	1.20	372010	820645	B	14590	09/01/88
									4.90	1.60		7.0	2552
UNDERGROUND MINE	2.40	31.80	63.80	BUCHANAN	4.40	83.90	5.10	0.80	372010	820654	B	14900	09/01/88
									4.20	1.60		7.5	2588
UNDERGROUND MINE	2.70	29.50	63.60	BUCHANAN	6.90	81.20	4.90	0.70	372055	821040	B	14400	09/01/88
									4.70	1.60		7.0	2804
UNDERGROUND MINE	3.20	29.00	63.40	BUCHANAN	7.60	81.00	4.80	0.60	372103	821402	B	14310	09/01/88
									4.40	1.60		7.5	2624
UNDERGROUND MINE	1.40	29.60	62.90	BUCHANAN	7.50	80.70	4.90	0.70	372117	820849	B	14330	09/01/88
									4.60	1.60		7.5	2804
UNDERGROUND MINE	3.20	28.90	64.40	BUCHANAN	6.70	81.40	4.90	0.70	372118	820846	B	14440	09/01/88
									4.70	1.60		7.5	2804
UNDERGROUND MINE	2.70	32.90	62.50	BUCHANAN	4.60	83.30	4.80	1.10	372131	821033	B	14680	09/01/88
									4.60	1.60		8.5	2453

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fixed Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				BUCHANAN			W218978	372140	820227	B	14390	09/01/88
2.20	30.90	62.50	61.20	6.60		1.00		4.40	1.70		8.0	2687
UNDERGROUND MINE				BUCHANAN			W223357	372151	820619	B	14620	09/01/88
1.90	30.30	64.20	82.30	5.50		0.70		4.90	1.60		7.5	2804
SURFACE MINE				BUCHANAN			W223361	372154	820230	B	14630	09/01/88
1.90	33.40	61.50	82.30	5.10		1.10		4.90	1.60		8.0	2516
UNDERGROUND MINE				BUCHANAN			W225107	372159	820534	B	14220	09/01/88
1.10	33.40	58.80	79.00	7.80		0.80		5.50	1.70		7.5	2804
UNDERGROUND MINE				BUCHANAN			W223358	372238	821142	B	14170	09/01/88
2.40	35.10	58.90	78.30	6.00		4.10		4.90	1.60		8.0	2030
SURFACE MINE				BUCHANAN			W223352	372250	820520	B	12550	09/01/88
1.40	29.70	52.70	70.50	17.60		0.80		5.20	1.40		7.5	2804
SURFACE MINE				BUCHANAN			W206890	372523	815758	B	14410	09/01/88
3.30	34.30	59.10	81.10	6.60		0.80		4.40	1.70		9.0	2804
UNDERGROUND MINE				BUCHANAN			W223353	372721	815850	B	14830	09/01/88
2.10	33.10	63.50	83.50	3.40		0.80		5.30	1.70		8.5	2516
DRILLCORE				HOTETOURT			W219206	372933	785952	A	11820	09/01/88
4.30	10.70	66.30	70.00	23.00		0.70		2.30	0.80		0.5	2552
SURFACE MINE				WISE			W231828	375854	823309	B	12710	09/01/88
16.50	31.30	64.20	74.30	4.50		0.70		14.60	1.50		0.0	2246
SURFACE MINE				WISE			W231829	375855	823309	B	12740	09/01/88
15.70	32.40	63.40	75.40	4.20		0.50		14.20	1.30		0.0	2291

Coal Field Information Printout for

WA - Washington





Coal Field Information Printout for: WA - Washington

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
-----													
				ASOTIN			D183127		460310	1172035	L	9280	09/01/88
15.80	37.80	47.00	51.30	15.20	59.00	3.10	0.40	0.60	21.60	0.70		0.0	2282
-----													
				PIERCE			D184658		454530	1220210	B	10930	09/01/88
2.40	23.40	41.20	51.30	25.30	62.30	4.00	0.50	0.60	6.20	1.60		1.0	2804
-----													
				THURSTON			D178913		464631	1224500	SB	10310	09/01/88
19.30	40.80	49.70	51.30	18.00	59.60	4.40	0.70	0.50	16.50	1.00		0.0	2399
-----													
				PIERCE			D183128		470415	1220040	B	8890	09/01/88
11.80	20.90	49.70	51.30	29.40	54.20	2.80	0.40	0.70	10.90	2.00		0.0	2804
-----													
				KING			D176203		472148	1215850	B	10290	09/01/88
6.20	21.70	54.40	51.30	23.90	61.90	3.30	0.40	0.40	9.30	1.20		0.0	2912
-----													
				WHATCOM			D176202		485030	1215645	A	10300	09/01/88
8.70	29.20	51.20	51.30	18.60	62.90	3.30	0.40	0.40	12.60	1.20		0.0	2912
-----													
				WHATCOM			D177025		485114	1215904	SA	8300	09/01/88
4.00	15.10	50.70	51.30	34.20	53.50	2.20	0.40	0.40	9.10	0.60		0.0	2912
-----													
				WHATCOM			D183123		485254	1220742	SA	9210	09/01/88
3.60	28.70	35.70	35.60	35.60	51.80	3.70	0.40	0.40	7.00	1.50		4.0	2300

Coal Field Information Printout for  
WV - West Virginia

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.20	21.80	73.90	4.30	MCDOWELL	86.00	4.70	0.50	371530	812943	B	14990	09/01/88
								3.20	1.30		9.0	2246
2.60	21.60	74.00	4.40	MCDOWELL	86.20	4.60	0.60	371611	813019	B	14900	09/01/88
								3.00	1.20		9.0	2912
US STEEL NO 14 MINE, RD FORK	4.90	25.20	69.80	MCDOWELL	85.50	4.80	0.70	371616	812758	B	14990	09/01/88
								2.70	1.30		9.0	2354
CONSOL JENKIN JONES MINE	2.40	23.50	69.90	MCDOWELL	83.80	4.50	0.60	371645	812530	B	14660	09/01/88
								3.30	1.20		9.0	2129
STR BNCH, BALLARD HARMON BR	6.20	24.00	63.80	MCDOWELL	75.40	4.10	0.60	371700	812650	B	12930	09/01/88
								6.60	1.10		1.5	2561
UNDERGROUND	2.40	16.70	80.30	MCDOWELL	88.40	4.40	0.70	371730	813450	B	15320	09/01/88
								2.30	1.20		9.0	2246
UNDERGROUND	2.50	16.60	66.30	MCDOWELL	74.30	3.90	0.70	371948	813831	B	12890	09/01/88
								2.70	1.30		9.0	2804
UNDERGROUND	1.40	15.40	75.10	MCDOWELL	81.50	4.10	1.40	372020	813957	B	14170	09/01/88
								2.20	1.30		5.0	2561
UNDERGROUND	1.20	15.40	79.90	MCDOWELL	87.30	4.40	0.60	372049	813747	B	15110	09/01/88
								1.90	1.10		8.0	2318
UNDERGROUND	1.70	16.30	73.50	MCDOWELL	80.60	4.10	1.50	372114	814025	B	14070	09/01/88
								2.20	1.40		7.0	2552
UNDERGROUND	2.10	17.00	77.30	MCDOWELL	85.80	4.40	0.70	372116	813136	B	14930	09/01/88
								2.20	1.20		9.0	2785
UNDERGROUND	2.50	17.00	76.50	MCDOWELL	84.30	4.30	0.90	372116	813957	B	14730	09/01/88
								2.60	1.40		8.5	2561
UNDERGROUND	3.20	16.10	78.90	MCDOWELL	86.50	4.30	0.70	372121	813058	B	14940	09/01/88
								2.30	1.20		7.0	2651
UNDERGROUND	1.00	15.30	78.00	MCDOWELL	85.20	4.10	0.50	372146	814123	B	14660	09/01/88
								2.30	1.20		0.0	2354
UNDERGROUND	1.50	15.20	78.70	MCDOWELL	85.30	4.20	0.80	372200	813614	B	14760	09/01/88
								2.40	1.20		7.5	2291
UNDERGROUND	1.50	24.80	71.30	MCDOWELL	85.30	4.70	0.60	372202	815041	B	15060	09/01/88
								4.10	1.40		8.5	2084

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash						Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	3.00	15.50	77.20	MCDOWELL	84.50	4.20	W193964	0.80	372220	813218	B	14600	09/01/88
									2.10	1.10		8.0	2723
UNDERGROUND	1.50	25.50	58.30	MCDOWELL	82.10	4.90	W192714	1.30	372225	815007	B	14590	09/01/88
									3.90	1.60		9.0	2219
UNDERGROUND	3.30	18.00	72.80	MCDOWELL	82.20	4.50	W194010	0.60	372243	812730	B	14350	09/01/88
									2.30	1.20		9.0	2804
UNDERGROUND	2.30	17.30	79.60	MCDOWELL	87.70	4.40	W194004	0.60	372251	813717	B	15330	09/01/88
									2.80	1.40		8.5	2552
UNDERGROUND	1.40	27.30	68.10	MCDOWELL	83.20	5.20	W192713	0.80	372305	815402	B	14830	09/01/88
									4.60	1.60		9.0	2606
UNDERGROUND	1.00	14.40	78.50	MCDOWELL	85.10	4.10	W193982	0.50	372404	814058	B	14610	09/01/88
									2.10	1.10		3.5	2642
STRIP	3.10	20.50	76.00	MCDOWELL	87.00	4.60	W193981	0.60	372406	812125	B	15230	09/01/88
									2.90	1.40		9.0	2804
UNDERGROUND	2.40	16.90	73.30	MCDOWELL	81.50	4.10	W193970	0.60	372420	813555	B	14120	09/01/88
									2.60	1.40		9.0	2804
UNDERGROUND	3.40	17.50	71.20	MCDOWELL	79.70	4.10	W193969	1.10	372437	814023	B	13880	09/01/88
									2.50	1.30		9.0	2804
STRIP	0.60	18.10	73.90	MCDOWELL	82.00	4.50	W191874	0.80	372445	813328	B	14180	09/01/88
									4.00	0.70		9.0	2678
UNDERGROUND	2.70	14.80	76.90	MCDOWELL	83.20	4.40	W193961	0.80	372446	813037	B	14430	09/01/88
									2.20	1.10		8.0	2804
UNDERGROUND	1.50	19.20	71.10	MCDOWELL	80.50	4.40	W193980	1.20	372450	812152	B	14100	09/01/88
									2.90	1.30		9.0	2507
UNDERGROUND	2.30	19.40	72.30	MCDOWELL	82.70	4.40	W193988	0.70	372458	813442	B	14400	09/01/88
									2.50	1.40		9.0	2804
UNDERGROUND	2.30	17.50	64.20	MCDOWELL	73.50	3.90	W194015	1.10	372502	812017	B	12860	09/01/88
									2.00	1.20		8.5	2651
UNDERGROUND	2.60	20.30	74.00	MCDOWELL	84.70	4.50	W193968	0.70	372520	814122	B	14820	09/01/88
									2.90	1.50		9.0	2804
UNDERGROUND	2.10	18.80	73.60	MCDOWELL	83.30	4.60	W194986	1.00	372600	812828	B	14540	09/01/88
									2.30	1.20		9.0	2750

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
POCAHONTAS NO 2	7.00	19.40	73.20	MERCER	7.40	80.60	3.90	0.50	W194386	372612	811358	B	13630	09/01/88
										6.40	1.20		1.0	2651
0.80	18.50	77.20		MERCER	4.30	86.60	4.50	1.10	W193728	372618	811626	B	15130	09/01/88
										2.30	1.20		9.0	2345
UNDERGROUND	2.30	19.30	75.70	MCDOWELL	5.00	85.50	4.50	1.30	W194987	372620	812742	B	14960	09/01/88
										2.40	1.30		9.0	2345
UNDERGROUND	2.00	16.00	50.30	WYOMING	33.70	58.10	3.40	0.80	W194012	372624	812004	B	10200	09/01/88
										3.00	1.00		8.0	2804
UNDERGROUND	2.30	17.50	75.90	WYOMING	6.60	85.40	4.30	0.80	W194019	372635	812225	B	14950	09/01/88
										1.60	1.30		9.0	2714
UNDERGROUND	2.50	18.70	75.00	MCDOWELL	6.30	84.20	4.50	1.10	W193994	372700	814120	B	14750	09/01/88
										2.50	1.40		9.0	2651
UNDERGROUND	3.60	19.40	68.70	MCDOWELL	11.90	78.00	4.40	1.50	W193995	372714	814208	B	13680	09/01/88
										3.20	0.90		9.0	2669
UNDERGROUND	1.90	17.90	70.40	WYOMING	11.70	80.20	4.20	1.20	W194020	372727	812252	B	13930	09/01/88
										1.50	1.20		9.0	2606
UNDERGROUND	3.20	32.60	64.70	MCDOWELL	2.70	83.40	5.10	1.00	W191871	372727	815648	B	14850	09/01/88
										6.30	1.50		9.0	2237
UNDERGROUND	1.70	18.30	78.00	MCDOWELL	3.70	87.30	4.60	0.60	W194007	372749	813731	B	15240	09/01/88
										2.30	1.50		9.0	2615
UNDERGROUND	2.30	15.80	76.70	MCDOWELL	7.50	84.50	4.00	0.60	W193976	372750	812808	B	14510	09/01/88
										2.30	1.10		4.5	2462
UNDERGROUND	2.40	16.50	75.00	WYOMING	8.50	83.00	4.10	0.50	W193973	372835	812308	B	14390	09/01/88
										2.80	1.10		7.0	2399
POCAHONTAS NO 3	1.40	29.00	42.30	MERCER	28.70	58.80	4.10	0.90	W194382	372845	811045	B	10410	09/01/88
										6.30	1.20		6.0	2804
UNDERGROUND	3.20	31.20	53.60	MCDOWELL	15.20	68.40	4.60	4.40	W191869	372854	815751	B	12630	09/01/88
										6.20	1.20		8.5	2219
0.50	12.90	48.70		WYOMING	38.40	54.20	2.80	0.40	W193726	372921	811834	B	9260	09/01/88
										3.50	0.70		8.5	2804
UNDERGROUND	3.10	17.20	75.80	WYOMING	7.00	83.50	4.20	1.90	W193974	372926	812421	B	14530	09/01/88
										2.30	1.10		8.0	2345

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Oxygen	Longitude	Rank	Hardgrove	Free Swell	Htg Val	Last Chg
UNDERGROUND	2.70	29.50	65.70	MCDOWELL	4.80	83.10	5.00	W191111	2.00	372933	3.50	815059	B		14780	9.0	09/01/88
												1.60					2192
UNDERGROUND	3.60	30.20	60.40	MCDOWELL	9.40	78.10	5.20	W191108	1.30	372933	4.90	815210	B		13860	8.5	09/01/88
												1.10					2732
UNDERGROUND	1.50	17.10	72.10	MERCER	10.80	80.40	4.10	W192728	0.50	372934	3.00	811456	B		14010	8.0	09/01/88
												1.20					2912
UNDERGROUND	2.40	17.00	77.80	WYOMING	5.20	86.60	4.50	W192720	0.50	372942	2.10	812200	B		14940	8.0	09/01/88
												1.10					2408
UNDERGROUND	2.50	16.10	77.00	WYOMING	6.90	85.10	4.10	W194015	0.50	372951	2.30	812034	B		14710	7.5	09/01/88
												1.10					2804
STRIP	1.70	19.20	76.10	WYOMING	4.70	86.70	4.60	W192722	0.50	373003	2.20	812125	B		14980	7.0	09/01/88
												1.30					2588
UNDERGROUND	3.10	19.20	78.30	WYOMING	2.50	87.80	4.80	W193992	0.80	373017	2.60	813443	B		15370	9.0	09/01/88
												1.50					2516
STRIP MINE	2.60	31.30	64.80	MCDOWELL	3.90	82.70	5.20	W191110	1.00	373031	6.50	815406	B		14490	8.5	09/01/88
												0.70					2579
	3.80	20.00	75.90	WYOMING	4.10	86.10	4.60	D165681	0.70	373046	2.90	811520	B		14820	8.0	09/01/88
												1.60					2912
UNDERGROUND	1.20	23.10	57.60	WYOMING	19.30	68.80	4.30	W19.129	2.10	373047	4.80	814710	B		12150	9.0	09/01/88
												0.70					2633
SEWELL STRIP	0.70	19.40	70.90	MERCER	9.70	80.30	4.50	W194370	0.70	373100	3.40	811320	B		14150	9.0	09/01/88
												1.40					2804
STRIP MINE	2.00	31.50	65.70	MCDOWELL	2.80	84.20	5.50	W191130	0.80	373115	5.70	815221	B		14830	9.0	09/01/88
												1.00					2353
UNDERGROUND	1.50	17.60	75.50	WYOMING	6.90	83.90	4.30	W192733	0.50	373125	3.20	812704	B		14550	7.0	09/01/88
												1.20					2408
UNDERGROUND	1.20	25.70	67.80	WYOMING	6.50	81.80	5.00	W191131	1.70	373149	4.10	814724	B		14430	9.0	09/01/88
												0.90					2390
UNDERGROUND	2.50	32.00	62.20	WYOMING	5.80	80.70	5.20	W191107	1.10	373157	5.80	814812	B		14470	9.0	09/01/88
												1.40					2444
UNDERGROUND	1.80	30.40	53.20	MINGO	16.40	70.30	4.70	W189349	3.10	373203	4.20	815417	B		12620	7.0	09/01/88
												1.30					2237

## Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.80	21.90	69.80	WYOMING	82.10	4.50	0.90	373248	813756	B	14370	09/01/88
								2.80	1.40		9.0	2732
UNDERGROUND	3.00	28.40	56.40	WYOMING	72.60	4.60	4.40	373257	814741	B	13140	09/01/88
								1.80	1.40		9.0	2138
UNDERGROUND	2.50	19.30	73.10	WYOMING	81.70	4.50	1.50	373302	812533	B	14380	09/01/88
								3.40	1.30		9.0	2408
UNDERGROUND	1.60	17.10	72.10	WYOMING	79.80	4.30	1.10	373307	812650	B	13870	09/01/88
								2.90	1.10		7.0	2561
UNDERGROUND	2.70	19.40	73.80	WYOMING	83.60	4.60	0.60	373315	813409	B	14500	09/01/88
								3.00	1.40		9.0	2912
STRIP	2.70	15.20	73.70	WYOMING	80.60	4.10	0.50	373324	812206	B	13870	09/01/88
								2.60	1.10		4.0	2714
UNDERGROUND	1.20	16.60	67.30	WYOMING	74.60	4.10	0.70	373324	812528	B	12930	09/01/88
								3.50	1.00		6.5	2912
STRIP	2.50	30.90	57.70	MINGO	76.10	4.70	1.10	373327	815435	B	13490	09/01/88
								5.40	1.30		7.5	2750
STRIP	9.50	21.30	75.40	WYOMING	86.30	4.80	1.30	373356	812555	B	15130	09/01/88
								2.80	1.50		9.0	2489
UNDERGROUND	1.60	42.70	41.30	MINGO	70.80	4.70	1.50	373404	820615	B	12540	09/01/88
								5.70	1.30		7.0	2777
STRIP	5.70	34.10	58.50	MINGO	77.10	4.50	1.00	373406	820619	B	13380	09/01/88
								8.60	1.40		1.5	2300
UNDERGROUND	2.90	33.10	60.00	MINGO	80.30	5.00	0.80	373409	815150	B	14250	09/01/88
								5.60	1.40		7.5	2750
UNDERGROUND	2.80	32.10	62.70	MINGO	81.80	5.00	0.70	373432	815205	B	14550	09/01/88
								5.90	1.40		8.5	2912
STRIP	3.60	33.70	59.80	MINGO	80.50	5.10	0.70	373439	820017	B	14390	09/01/88
								5.70	1.50		9.0	2795
STRIP	3.90	33.90	62.90	MINGO	82.20	5.00	0.70	373458	815300	B	14370	09/01/88
								7.90	1.00		4.5	2579
	1.90	23.50	73.10	WYOMING	86.40	4.90	0.90	373515	812902	B	15210	09/01/88
								2.90	1.50		9.0	2255

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carb <sup>3</sup> <sub>1</sub>	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	1.50	18.60	74.90	WYOMING	6.50	83.30	4.50	1.50	373545	812550	B	14610	09/01/88
									2.80	1.40		9.0	2192
UNDERGROUND	4.80	30.80	62.90	MINGO	8.30	78.80	4.70	0.60	373559	815554	B	13760	09/01/88
									8.10	1.50		1.0	2804
UNDERGROUND	1.70	18.10	72.50	WYOMING	9.40	81.40	4.30	0.90	373609	812331	B	14040	09/01/88
									2.90	1.10		5.5	2732
UNDERGROUND	5.20	33.00	53.00	MINGO	14.00	72.50	4.70	0.80	373621	820800	B	12850	09/01/88
									6.60	1.40		6.0	2678
UNDERGROUND	2.00	32.80	57.40	MINGO	9.80	77.30	4.80	1.50	373635	820313	B	13550	09/01/88
									5.20	1.40		7.5	2354
POCAHONTAS NO 6	0.60	17.20	78.10	RALEIGH	4.70	85.60	4.40	1.60	373700	811045	B	14910	08/01/88
									2.40	1.30		8.5	2417
UNDERGROUND	2.30	22.30	75.40	WYOMING	2.30	87.50	4.80	0.50	373702	813358	B	15390	09/01/88
									3.30	1.50		9.0	2804
STRIP	4.00	26.50	69.90	WYOMING	3.50	84.50	5.00	0.60	373709	813635	B	14910	09/01/88
									4.70	1.60		8.0	2651
UNDERGROUND	2.00	16.00	79.30	RALEIGH	4.70	85.60	4.50	0.90	373741	811012	B	15040	09/01/88
									2.10	1.20		8.0	2804
NO 5 MINE, JUMAERTS COAL CO	2.40	34.80	58.60	MINGO	6.60	80.10	5.10	0.80	373750	815729	B	14300	09/01/88
									5.90	1.50		8.0	2912
STRIP	3.70	17.80	77.80	RALEIGH	4.40	85.80	4.60	1.00	373751	811023	B	15020	09/01/88
									2.50	1.70		9.0	2354
UNDERGROUND	2.30	33.60	58.10	MINGO	8.30	78.40	5.20	0.90	373812	820518	B	14030	09/01/88
									5.70	1.50		9.0	2804
UNDERGROUND	3.10	35.10	57.90	MINGO	7.00	79.20	5.10	1.00	373831	820632	B	14160	09/01/88
									6.20	1.50		9.0	2804
UNDERGROUND	2.30	37.20	58.70	MINGO	4.10	82.00	5.40	0.80	373845	820938	B	14720	09/01/88
									6.20	1.50		7.5	2804
	1.30	17.60	79.40	RALEIGH	3.00	87.10	4.60	0.70	373900	810345	B	15110	09/01/88
									3.10	1.50		1.0	2696
UNDERGROUND	2.80	35.10	56.20	MINGO	8.70	76.40	5.20	1.20	373907	821222	B	13580	09/01/88
									7.70	0.80		0.0	2804



Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Last Chg
										Oxygen	Nitrogen	Hardgrove			Hemi Temp
UNDERGROUND	2.90	35.20	61.60	MINGO	3.20	83.40	5.20	W191119	0.70	373941	815258	B	14820	8.5	09/01/88 2912
POCAHONTAS NO 3	0.70	14.50	72.80	MERCER	12.70	79.00	4.20	W194387	0.50	373945	810250	B	13540	3.5	09/01/88 2804
UNDERGROUND	2.60	33.10	59.70	MINGO	7.20	78.70	5.10	W190674	0.60	373948	821159	B	13900	7.0	09/01/88 2759
STRIP	1.30	33.40	63.00	WYOMING	3.60	83.10	4.90	W193951	0.90	373956	814234	B	14880	9.0	09/01/88 2804
UNDERGROUND	2.70	35.10	58.10	MINGO	6.80	79.00	5.10	W191868	1.50	374003	815308	B	14170	8.0	09/01/88 2579
UNDERGROUND	3.20	33.90	55.60	MINGO	10.50	75.90	4.90	W191873	0.50	374012	821437	B	13400	5.0	09/01/88 2813
STRIP	1.60	34.70	52.50	LOGAN	12.80	73.90	4.90	W195044	3.00	374021	815123	B	13420	6.5	09/01/88 2543
STRIP	3.00	33.90	58.90	LOGAN	7.20	78.70	5.00	W195068	1.50	374021	815419	B	14060	9.0	09/01/88 2453
UNDERGROUND	4.10	33.00	57.60	MINGO	9.40	76.90	5.10	W190875	0.70	374026	821433	B	13620	7.0	09/01/88 2912
STRIP	3.50	34.70	55.60	BOONE	9.70	76.90	5.00	W195041	0.80	374036	815148	B	13670	7.5	09/01/88 2804
STRIP	2.00	36.40	57.70	LOGAN	5.90	80.80	5.20	W195043	0.60	374037	815145	B	14430	9.0	09/01/88 2804
UNDERGROUND	2.00	34.70	54.80	LOGAN	10.50	75.80	5.20	W195067	1.50	374039	815152	B	13630	9.0	09/01/88 2579
UNDERGROUND	5.90	32.10	61.70	LOGAN	6.20	75.60	4.50	W189294	0.50	374040	815130	B	12940	0.0	09/01/88 2786
UNDERGROUND	2.50	34.80	61.70	LOGAN	3.50	83.40	5.60	W195066	0.60	374046	815133	B	14890	9.0	09/01/88 2606
STRIP	1.60	34.80	53.90	LOGAN	11.30	75.90	4.80	W195042	0.60	374046	815148	B	13550	7.0	09/01/88 2804
UNDERGROUND	1.90	34.40	56.90	LOGAN	8.70	76.60	5.10	W189295	1.70	374047	815130	B	13640	8.0	09/01/88 2507

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Oxygen	Sulfur	Code Number	Latitude	Longitude	Rank	Free Swell	Htg Val	Last Chg
UNDERGROUND	1.80	33.80	62.00	LOGAN	4.20	81.80	5.30	6.80	0.50	W189293	374048	814820	B	14490	7.5	09/01/88
																2696
UNDERGROUND	2.60	35.30	60.20	LOGAN	4.50	81.60	5.20	6.50	0.70	W195054	374049	815320	B	14590	9.0	09/01/88
																2759
UNDERGROUND	1.80	35.80	54.60	LOGAN	9.60	76.50	5.00	5.30	2.30	W195056	374054	815328	B	13790	8.0	09/01/88
																2309
UNDERGROUND	3.90	39.80	56.70	MINGO	3.50	81.10	5.50	7.60	0.60	W195037	374116	821356	B	14520	5.5	09/01/88
																2759
STRIP	4.40	32.70	52.70	MINGO	14.60	70.80	4.50	7.90	0.80	W193955	374120	820710	B	12410	1.0	09/01/88
																2804
UNDERGROUND	4.00	35.90	52.60	MINGO	11.50	73.70	4.80	7.70	0.80	W189338	374123	821545	B	13080	2.5	09/01/88
																2912
STRIP	3.10	34.50	54.80	LOGAN	10.70	75.50	5.00	6.50	0.90	W195022	374138	815630	B	13520	8.0	09/01/88
																2804
UNDERGROUND	1.50	34.30	55.80	WYOMING	9.90	76.60	5.10	6.50	0.60	W189292	374153	814310	B	13680	8.5	09/01/88
																2912
UNDERGROUND	2.60	34.90	59.90	LOGAN	5.20	81.50	5.10	5.80	0.90	W195060	374158	815313	B	14510	9.0	09/01/88
																2804
UNDERGROUND	2.10	35.60	55.20	LOGAN	9.20	77.20	5.10	6.00	1.10	W195057	374204	815410	B	13800	8.5	09/01/88
																2768
STRIP	4.60	33.20	65.00	LOGAN	1.80	84.10	5.20	6.80	0.60	W195036	374224	814739	B	14800	6.0	09/01/88
																2462
UNDERGROUND	2.90	33.20	57.10	LOGAN	9.70	76.90	4.90	6.40	0.70	W191125	374229	814740	B	13650	7.5	09/01/88
																2812
UNDERGROUND	1.90	35.70	58.70	LOGAN	5.60	81.60	5.10	5.60	0.70	W195058	374314	815500	B	14520	8.5	09/01/88
																2543
UNDERGROUND	3.30	31.50	64.10	WYOMING	4.40	83.40	5.10	5.10	0.60	W195024	374354	814025	B	14760	9.0	09/01/88
																2804
UNDERGROUND	3.00	36.70	53.70	MINGO	9.60	75.40	5.00	7.50	1.10	W189337	374359	821137	B	13520	4.5	09/01/88
																2912
UNDERGROUND	3.20	33.60	62.60	LOGAN	3.80	81.70	5.20	6.20	1.40	W195021	374423	815643	B	14670	9.0	09/01/88
																2147

## Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
								Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND				LOGAN				W195020	374447	815438	B	14800	09/01/88
3.10	33.20	53.40	3.40			83.00	5.20	0.90	6.10	1.40		8.5	2057
UNDERGROUND				LOGAN				W189295	374511	815108	B	13860	09/01/88
1.40	32.90	58.40	8.70			77.70	5.10	0.60	6.80	1.10		9.0	2912
STRIP				MINGO				W195033	374524	821805	B	13690	09/01/88
5.20	35.40	57.50	7.10			77.20	5.00	0.80	8.40	1.50		3.0	2786
MAPLE MEADOW MINE				RALEIGH				W201763	374527	812150	B	13770	09/01/88
1.20	18.50	69.90	11.60			79.20	4.10	0.40	3.50	1.20		9.0	2912
STRIP				MINGO				W195030	374528	821815	B	13920	09/01/88
4.20	38.30	54.30	7.40			77.60	5.10	0.70	7.60	1.60		5.0	2804
UNDERGROUND				WYOMING				W192738	374553	814207	B	14560	09/01/88
3.60	35.70	59.20	5.10			81.60	5.60	0.90	5.60	1.20		9.0	2669
UNDERGROUND				WYOMING				W191889	374623	812925	B	14820	09/01/88
4.70	31.70	64.00	4.30			83.10	5.30	2.60	3.70	1.00		9.0	2228
BELVA COAL CO. MINE 5A				LOGAN				W187039	374626	815843	B	13160	09/01/88
5.90	35.10	54.70	10.20			74.70	4.70	0.90	8.10	1.40		2.0	2884
STRIP				LOGAN				W195003	374627	814118	B	11410	09/01/88
3.70	29.00	47.30	23.70			64.10	4.20	1.10	5.80	1.10		4.5	2804
STRIP				LOGAN				W195001	374631	814049	B	13780	09/01/88
2.70	31.60	58.30	10.10			77.00	4.80	0.90	5.80	1.40		6.0	2804
WEDGEWOOD MINING				LOGAN				W187007	374642	815256	B	12060	09/01/88
5.00	33.90	49.60	16.50			68.80	4.30	0.80	8.40	1.20		1.5	2912
UNDERGROUND				LOGAN				W191903	374644	815040	B	13890	09/01/88
2.40	32.60	58.30	9.10			78.30	5.50	0.60	5.50	1.00		8.5	2912
ELKAY MINING CO. WADE NO 1				LOGAN				W187035	374645	815404	B	13750	09/01/88
5.50	38.10	53.00	8.90			76.60	5.10	0.80	7.10	1.50		4.5	2912
UNDERGROUND				LOGAN				W191901	374647	815028	B	13910	09/01/88
2.30	34.90	56.80	8.30			77.70	5.20	1.80	5.90	1.10		8.0	2543
1.70	32.20	56.80	11.00	LOGAN				W192710	374650	814431	B	13600	09/01/88
						76.40	5.10	0.70	5.70	1.10		8.5	2912
STRIP				RALEIGH				W194981	374654	810827	B	14450	09/01/88
2.80	17.50	74.90	7.60			82.90	4.30	1.60	2.40	1.20		7.0	2561

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ELK MINING CO, MINE 1	2.60	35.30	58.40	LOGAN	6.30	81.00	W187010	1.10	374734	814021	B	14460	09/01/88
							5.10	1.10	5.10	1.40		7.0	2723
PERRY BRANCH COAL CO, MINE 1	3.20	32.00	45.20	LOGAN	22.80	64.80	W187014	0.60	374758	814645	B	11450	09/01/88
							4.30	0.60	6.40	1.10		4.0	2912
UNDERGROUND	3.10	32.10	54.20	LOGAN	13.70	73.80	W194993	0.70	374804	814817	B	13000	09/01/88
							4.60	0.70	5.90	1.30		7.5	2804
	3.20	35.80	58.50	LOGAN	5.70	81.30	W187033	0.90	374810	814034	B	14500	09/01/88
							5.20	0.90	5.50	1.40		7.5	2516
STRIP	4.60	27.40	69.20	RALEIGH	3.40	85.30	W191862	2.00	374818	812802	B	15160	09/01/88
							5.00	2.00	2.90	1.40		9.0	2192
CORE	2.80	32.70	60.00	LOGAN	7.30	79.70	W195039	1.10	374818	814613	B	14260	09/01/88
							5.10	1.10	5.40	1.40		9.0	2741
MINE 88, BUFFALO MINING CO	2.60	34.20	49.70	LOGAN	16.10	71.50	W187034	0.90	374820	813952	B	12670	09/01/88
							4.60	0.90	5.60	1.30		6.0	2912
UNDERGROUND	3.90	25.20	45.50	LOGAN	29.30	59.00	W194995	0.60	374830	814554	B	10370	09/01/88
							3.80	0.60	6.30	1.00		3.0	2804
UNDERGROUND	2.50	35.80	53.60	LOGAN	10.60	76.80	W189252	0.90	374841	814811	B	13630	09/01/88
							5.00	0.90	5.40	1.30		7.0	2912
UNDERGROUND	0.40	38.70	53.60	LOGAN	7.70	80.80	W190686	0.70	374842	824045	B	14770	09/01/88
							5.80	0.70	3.50	1.50		4.5	2228
B&S COAL CO, MINE 1	5.50	30.50	47.30	LOGAN	22.20	66.00	W187012	0.40	374845	814624	B	11590	09/01/88
							4.10	0.40	6.10	1.20		2.5	2912
UNDERGROUND	3.50	18.00	73.50	SUMMERS	8.50	82.10	W210191	1.10	374857	805230	B	14280	09/01/88
							4.40	1.10	2.60	1.30		9.0	2804
UNDERGROUND	2.30	20.00	77.30	RALEIGH	2.70	86.80	W206550	0.70	374913	810846	B	15250	09/01/88
							5.10	0.70	3.10	1.60		9.0	2804
UNDERGROUND	1.30	29.80	50.40	LOGAN	19.80	67.50	W189291	0.90	374916	814755	B	12000	09/01/88
							4.60	0.90	6.20	1.00		5.5	2912
UNDERGROUND	2.60	35.40	53.40	LOGAN	11.20	75.50	W189261	1.60	374918	815240	B	13440	09/01/88
							4.90	1.60	5.40	1.40		6.0	2678
YOUNGSTOWN MINES, DEHUE 7B	2.20	34.70	57.90	LOGAN	7.40	78.50	W187038	0.60	374925	815629	B	14000	09/01/88
							5.10	0.60	6.90	1.50		8.0	2912

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	3.10	38.70	54.80	6.50	78.10	5.20	0.80	374955	822301	B	13960	09/01/88
				MINGO				8.10	1.30		3.5	2912
UNDERGROUND	2.40	32.90	55.20	11.90	75.80	4.80	1.00	375009	813739	B	13520	09/01/88
				BOONE				5.10	1.40		7.5	2615
UNDERGROUND	2.60	30.90	58.70	10.40	77.90	4.90	0.50	375047	813332	B	13740	09/01/88
				RALEIGH				5.00	1.20		7.5	2912
STRIP	3.80	36.70	49.70	13.80	72.20	4.80	0.70	375047	815657	B	12900	09/01/88
				LOGAN				7.20	1.50		7.5	2804
STRIP	3.10	19.10	70.70	10.20	78.30	4.80	1.00	375056	805823	B	13910	09/01/88
				FAYETTE				4.00	1.70		9.0	2750
UNDERGROUND	2.10	31.10	59.60	9.30	78.70	5.10	0.70	375057	813325	B	14000	09/01/88
				RALEIGH				5.20	1.00		9.0	2912
UNDERGROUND	3.60	32.60	58.60	8.80	79.10	5.00	2.30	375143	813254	B	14170	09/01/88
				RALEIGH				3.60	1.20		8.5	2147
UNDERGROUND	3.60	35.70	59.40	3.90	80.20	5.40	0.80	375148	822305	B	14240	09/01/88
				MINGO				8.90	0.80		5.5	2102
STRIP	4.90	29.70	58.40	11.90	74.40	4.90	1.00	375231	813336	B	13240	09/01/88
				RALEIGH				6.70	1.10		8.5	2912
STRIP	4.30	32.50	57.90	9.60	77.80	5.00	0.70	375231	813337	B	13760	09/01/88
				RALEIGH				5.80	1.10		5.0	2912
STRIP	4.30	33.20	54.50	12.30	74.70	5.10	0.70	375231	813338	B	13230	09/01/88
				RALEIGH				6.20	1.00		9.0	2912
STRIP	6.60	32.40	61.10	6.50	78.10	4.90	0.60	375231	813339	B	13650	09/01/88
				RALEIGH				8.80	1.10		1.0	2912
UNDERGROUND	1.90	18.70	73.70	7.60	82.80	4.60	1.30	375234	804644	B	14280	09/01/88
				FAYETTE				2.40	1.30		9.0	2624
DONNA MINE	3.10	37.70	53.00	9.30	76.70	5.00	0.60	375237	815540	B	13610	09/01/88
				LOGAN				7.00	1.40		7.0	2912
BETTY MINE	2.50	34.90	56.10	9.00	77.50	4.90	0.90	375253	814930	B	13690	09/01/88
				LOGAN				6.20	1.50		7.5	2912
STRIP	3.40	32.10	51.90	16.00	71.30	4.60	0.70	375257	814216	B	12610	09/01/88
				BOONE				6.20	1.20		4.0	2804

## Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.30	31.80	62.70	RALEIGH	5.50	82.30	5.10	W195047	0.70	375258	813035	B	14680	09/01/88
										5.00	1.40		9.0	2804
UNDERGROUND	1.60	18.90	63.60	FAYETTE	17.50	72.20	4.20	W206566	0.90	375314	805534	B	12630	09/01/88
										3.80	1.40		8.0	2912
BUFFALO MINING CO, MARK MINE	4.20	41.00	51.20	WAYNE	7.80	76.30	5.00	W187011	2.30	375314	822316	B	13680	09/01/88
										7.10	1.50		5.0	2129
STRIP	4.60	28.60	63.00	RALEIGH	8.40	79.60	5.00	W206549	0.80	375332	811836	B	13900	09/01/88
										4.60	1.60		8.5	2804
STRIP	2.60	25.10	70.00	FAYETTE	4.90	84.20	4.80	W206542	0.60	375336	811402	B	14870	09/01/88
										3.80	1.70		9.0	2804
UNDERGROUND	2.30	34.20	59.40	RALEIGH	6.40	81.20	5.10	W189339	0.50	375350	813003	B	14410	09/01/88
										5.30	1.50		6.5	2912
UNDERGROUND	1.70	26.00	49.00	BOONE	25.00	63.20	4.30	W191114	0.60	375356	813340	B	11190	09/01/88
										5.90	1.00		3.5	2912
UNDERGROUND	4.30	34.30	57.30	BOONE	8.40	77.40	5.10	W191880	0.80	375404	814354	B	13760	09/01/88
										7.20	1.10		7.0	2912
UNDERGROUND	2.90	35.60	53.00	LOGAN	11.40	73.50	4.70	W195063	1.60	375405	815155	B	13210	09/01/88
										7.50	1.30		7.0	2804
JEAN MINE	3.10	32.40	48.90	LOGAN	18.70	68.30	4.50	W187023	1.10	375415	815016	B	12140	09/01/88
										6.20	1.20		6.5	2912
STRIP	2.10	21.20	73.00	FAYETTE	5.80	83.20	4.90	W206545	2.20	375421	811357	B	14630	09/01/88
										2.20	1.70		9.0	2147
UNDERGROUND	3.60	37.00	57.80	LOGAN	5.20	79.90	5.20	W191887	1.10	375431	814540	B	14270	09/01/88
										7.50	1.10		7.0	2786
STRIP	4.50	22.90	74.70	FAYETTE	2.40	87.20	5.00	W206546	0.60	375433	810759	B	15220	09/01/88
										2.90	1.90		9.0	2516
UNDERGROUND	2.40	32.50	53.90	LOGAN	13.60	73.50	4.70	W195062	0.90	375444	814851	B	12990	09/01/88
										5.90	1.40		7.0	2804
STRIP	5.10	36.80	60.70	LOGAN	2.50	82.80	5.20	W195055	0.70	375450	815805	B	14700	09/01/88
										7.20	1.60		5.0	2543
STRIP	3.00	19.90	74.30	GREENBRIER	5.80	84.20	4.70	W206540	0.90	375456	804630	B	14630	09/01/88
										3.10	1.30		9.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
UNDERGROUND	1.50	33.10	64.60	RALEIGH	2.30	84.90	W191117	375503	813321	B	15040	09/01/88
							5.30	5.40	1.40		9.0	2912
UNDERGROUND	3.20	38.20	54.50	LOGAN	7.30	78.90	W195061	375507	814751	B	13970	09/01/88
							5.20	6.50	1.40		7.5	2804
BUFFALO NO 4 MINE	2.40	31.10	39.70	LOGAN	29.20	63.20	W187022	375512	815120	B	11190	09/01/88
							4.20	1.50	1.10		5.5	2912
UNDERGROUND	3.40	33.60	54.60	BOONE	11.80	75.20	W191881	375556	813400	B	13340	09/01/88
							4.90	6.20	1.00		7.5	2804
UNDERGROUND	3.50	34.90	55.00	BOONE	10.10	76.50	W191882	375556	814400	B	13600	09/01/88
							5.10	6.20	1.20		7.0	2912
STRIP	3.80	19.90	74.30	GREENBRIER	5.80	84.00	W205539	375600	804257	B	14650	09/01/88
							4.80	3.10	1.50		9.0	2723
UNDERGROUND	2.20	35.50	50.60	BOONE	3.90	82.60	W191115	375612	813615	B	14620	09/01/88
							5.40	6.20	1.30		8.5	2624
UNDERGROUND	3.90	36.50	58.20	LOGAN	5.30	79.10	W195034	375634	815625	B	14220	09/01/88
							5.30	7.30	1.60		6.0	2246
UNDERGROUND	2.80	30.60	51.50	BOONE	17.90	68.80	W191884	375636	814350	B	12190	09/01/88
							4.50	7.10	1.00		6.0	2912
2-C MIFFLIN MINE	2.80	34.60	54.40	BOONE	11.00	75.50	W187021	375703	815015	B	13260	09/01/88
							4.60	6.60	1.40		6.0	2354
PRATT MINING CO	2.20	31.40	63.10	FAYETTE	5.50	83.50	D170192	375728	811915	B	14680	09/01/88
							5.10	3.60	1.50		5.5	2912
PRATT MINING CO	2.40	30.20	63.20	FAYETTE	6.60	81.60	D170191	375729	811917	B	14480	09/01/88
							5.00	4.60	1.50		6.5	2912
UNDERGROUND	2.60	23.80	67.10	GREENBRIER	9.10	80.80	W210130	375810	803613	B	14100	09/01/88
							4.70	2.70	1.30		9.0	2804
UNDERGROUND	1.80	38.00	55.10	BOONE	6.90	79.30	W191885	375815	813914	B	14260	09/01/88
							5.60	6.30	1.10		9.0	2777
STRIP	5.10	23.00	71.20	GREENBRIER	5.80	83.20	W210190	375820	803316	B	14620	09/01/88
							4.80	3.80	1.80		9.0	2804
STRIP	2.70	23.40	70.50	GREENBRIER	6.10	83.50	W210134	375829	803659	B	14630	09/01/88
							4.70	3.30	1.30		9.0	2507

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	4.80	27.50	70.30	FAYETTE	85.70	5.10	W206547	375834	810406	B	15140	09/01/88
						0.60		4.60	1.80		9.0	2660
STRIP	2.70	31.00	62.70	FAYETTE	81.70	5.10	W210338	375911	811917	B	14620	09/01/88
						0.80		4.40	1.70		8.5	2804
UNDERGROUND	3.30	25.00	70.10	FAYETTE	83.90	4.70	W210124	375931	805436	B	14750	09/01/88
						0.70		4.10	1.70		9.0	2804
C D NO 36 MINE	1.80	33.30	61.60	KANAWHA	83.20	5.10	D170188	375946	812345	B	14740	09/01/88
						0.50		4.50	1.50		7.0	2912
UNDERGROUND	3.70	37.30	54.90	BOONE	77.60	5.20	W195052	375957	815518	B	13880	09/01/88
						0.70		7.10	1.60		5.5	2804
STRIP	4.30	36.20	54.00	BOONE	74.00	5.00	W195017	375958	815518	B	13390	09/01/88
						2.10		7.60	1.50		4.0	2165
STRIP	2.80	34.40	44.10	BOONE	65.40	4.60	W155016	375958	815520	B	11630	09/01/88
						0.50		6.90	1.10		1.0	2804
STRIP	3.70	37.20	58.40	BOONE	79.50	5.30	W195013	375958	815529	B	14340	09/01/88
						1.70		7.40	1.70		5.0	2057
STRIP	4.10	36.30	56.20	BOONE	77.50	5.10	W195014	375959	815521	B	13940	09/01/88
						0.90		7.50	1.50		5.5	2561
	1.60	29.90	68.10	FAYETTE	85.90	5.00	D168088	380000	810730	B	15190	09/01/88
						0.50		5.10	1.50		0.0	0
	2.10	24.90	72.10	FAYETTE	85.00	4.70	D161644	380010	810235	B	14750	09/01/88
						0.60		5.20	1.50		0.0	0
OMAR MINING, CHESTERFIELD 3	3.50	35.60	53.30	BOONE	75.80	4.80	W187015	380025	814439	B	13340	09/01/88
						0.60		6.40	1.30		5.5	2912
STRIP	4.20	31.80	63.20	FAYETTE	82.20	5.50	W206541	380026	811025	B	14710	09/01/88
						0.70		4.90	1.70		8.5	2804
STRIP	1.60	32.00	61.00	FAYETTE	81.20	5.10	W210338	380026	811845	B	14490	09/01/88
						0.90		4.30	1.50		8.0	2804
UNDERGROUND	2.50	32.60	58.10	KANAWHA	78.10	5.00	W210332	380035	812309	B	13930	09/01/88
						0.90		5.30	1.40		8.0	2804
UNDERGROUND	2.20	26.60	69.00	FAYETTE	84.40	5.00	W210182	380056	805335	B	14840	09/01/88
						0.80		3.80	1.60		9.0	2804



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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
STRIP	3.70	26.00	66.10	GREENBRIER	7.90	79.50	4.90	1.30	380100	803351	B	14330	09/01/88
									4.70	1.70		9.0	2759
STRIP	6.30	25.50	67.20	GREENBRIER	7.30	81.00	4.90	1.30	380107	803642	B	14390	09/01/88
									3.90	1.60		9.0	2660
DAUGHERTY MINING CO, MINE 1	4.20	36.80	59.90	BOONE	3.30	82.30	5.30	0.70	380112	814533	B	14670	09/01/88
									6.90	1.50		7.5	2669
STRIP	5.90	26.40	69.20	FAYETTE	4.40	84.20	5.30	0.50	380117	805736	B	14790	09/01/88
									3.80	1.70		9.0	2804
UNDERGROUND	1.10	36.10	51.60	KANAWHA	12.30	74.40	4.90	0.90	380129	812109	B	13200	09/01/88
									6.10	1.40		7.5	2912
OMAR MINING, CHESTERFIELD 5	2.50	37.20	50.80	BOONE	12.00	73.90	4.80	0.90	380132	814300	B	13240	09/01/88
									7.00	1.40		5.5	2912
UNDERGROUND	3.90	35.30	59.10	BOONE	5.60	79.50	5.50	0.80	380148	814200	B	14150	09/01/88
									7.20	1.40		6.5	2912
STRIP	4.20	34.80	57.80	LOGAN	7.40	77.20	4.90	0.70	380151	815518	B	13740	09/01/88
									8.30	1.50		4.5	2804
UNDERGROUND	3.10	24.80	68.30	GREENBRIER	6.80	81.50	4.70	1.20	380153	803824	B	14400	09/01/88
									4.50	1.30		9.0	2804
EXPANSION MINING CO, MINE 1	3.10	34.30	46.50	BOONE	19.20	67.60	4.40	0.60	380159	814134	B	11910	09/01/88
									7.00	1.20		5.0	2912
STRIP	2.90	27.00	67.30	GREENBRIER	5.70	81.80	4.70	1.20	380203	803517	B	14630	09/01/88
									4.80	1.80		9.0	2750
STRIP	1.20	52.10	38.80	BOONE	9.10	75.80	6.40	1.00	380205	815438	B	14270	09/01/88
									6.20	1.50		0.5	2128
STRIP	2.50	25.80	65.10	GREENBRIER	9.10	79.80	4.80	1.20	380206	803525	B	14020	09/01/88
									3.60	1.50		9.0	2759
BETHLEHEM MINE	1.70	35.40	53.70	KANAWHA	10.90	76.20	5.10	0.70	380211	812628	B	13610	09/01/88
									5.60	1.50		7.0	2912
STRIP	3.90	25.90	70.90	GREENBRIER	3.20	84.60	5.10	1.10	380217	804541	B	14960	09/01/88
									4.20	1.80		9.0	2354
UNDERGROUND	2.70	31.60	59.40	BOONE	9.00	77.70	4.90	0.90	380223	813323	B	13860	09/01/88
									6.00	1.50		0.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND				KANAWHA									
2.70	35.50	54.70	9.80			76.60	4.90	1.50	380250	812633	B	13620	09/01/88
									5.90	1.30		6.5	2894
STRIP				FAYETTE									
2.50	32.40	53.50	14.10			73.20	4.70	0.60	380305	812054	B	13060	09/01/88
									6.10	1.30		5.0	2804
STRIP				FAYETTE									
5.50	34.60	57.30	8.10			75.80	4.90	0.70	380310	812053	B	13380	09/01/88
									9.00	1.50		1.0	2777
STRIP				BOONE									
3.20	34.70	53.60	11.70			74.70	4.80	0.60	380345	813527	B	13160	09/01/88
									6.90	1.30		2.0	2912
UNDERGROUND				GREENBRIER									
2.50	25.70	68.00	6.30			82.60	4.90	1.00	380358	803810	B	14700	09/01/88
									3.30	1.90		9.0	2516
STRIP				GREENBRIER									
3.00	24.60	69.70	5.70			83.20	5.00	0.60	380400	804630	B	14630	09/01/88
									4.00	1.50		9.0	2804
UNDERGROUND				FAYETTE									
2.40	25.80	65.40	8.80			79.70	5.00	0.80	380417	805521	B	13890	09/01/88
									4.10	1.60		9.0	2804
5.20	37.00	47.60	15.40	WAYNE									
						67.50	4.70	2.00	380419	823144	B	12110	09/01/88
									8.90	1.50		0.0	2759
STRIP				GREENBRIER									
2.70	26.60	66.20	7.20			81.20	4.90	1.30	380437	803118	B	14340	09/01/88
									3.60	1.80		9.0	2804
1.90	26.00	71.10	2.90	FAYETTE									
						84.30	4.70	0.50	380445	810550	B	14620	09/01/88
									6.10	1.50		0.0	0
UNDERGROUND				GREENBRIER									
5.10	26.00	69.80	4.20			83.50	5.00	0.90	380456	803259	B	14760	09/01/88
									4.50	1.90		9.0	2354
UNDERGROUND				BOONE									
2.50	36.90	56.70	6.40			77.60	5.40	3.30	380504	814401	B	14110	09/01/88
									6.20	1.10		6.5	2084
STRIP				BOONE									
4.30	34.90	52.00	13.10			71.80	5.00	1.60	380528	813544	B	12920	09/01/88
									7.00	1.50		6.0	2642
UNDERGROUND				LOGAN									
3.70	34.40	55.00	10.60			75.50	4.80	0.60	380540	813445	B	13380	09/01/88
									7.00	1.50		5.5	2804
6.80	35.70	48.80	15.50	WAYNE									
						66.90	4.70	0.90	380545	823047	B	11880	09/01/88
									10.60	1.40		0.0	2804
DRIFT				KANAWHA									
3.20	36.80	60.40	2.80			82.90	5.30	0.80	380639	812133	B	14730	09/01/88
									6.70	1.50		8.0	2660

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.80	27.80	68.30	FAYETTE	3.90	84.40	5.30	0.60	380645	805701	B	14830	09/01/88
									4.10	1.70		9.0	2651
STRIP	2.10	39.40	55.70	KANAWHA	4.90	80.90	5.40	0.80	380708	812816	B	14410	09/01/88
									6.50	1.50		7.5	2804
STRIP	4.00	32.20	54.10	BOONE	13.70	71.80	4.50	1.10	380727	815234	B	12750	09/01/88
									7.50	1.40		2.5	2804
UNDERGROUND	3.20	37.50	58.50	KANAWHA	4.00	82.10	5.30	0.60	380729	812358	B	14530	09/01/88
									6.60	1.40		7.0	2912
UNDERGROUND	3.40	36.20	57.40	KANAWHA	6.40	79.00	5.20	0.90	380730	813048	B	14010	09/01/88
									7.10	1.40		6.0	2804
STRIP	3.70	25.80	61.70	GREENBRIER	12.50	75.20	4.60	1.10	380734	803422	H	13380	09/01/88
									5.00	1.60		9.0	2405
	15.10	35.20	58.80	FAYETTE	6.00	71.60	3.80	0.60	380735	811223	B	11710	09/01/88
									16.70	1.30		0.0	2462
UNDERGROUND	3.10	34.70	54.80	KANAWHA	10.50	74.00	5.10	1.10	380740	813020	B	13390	09/01/88
									7.90	1.40		6.5	2804
STRIP	3.60	35.10	56.00	HOONE	8.90	74.40	5.10	1.70	380740	815327	B	13460	09/01/88
									8.30	1.60		4.0	2201
STOCKTON NO 2 MINE	1.90	34.70	47.30	KANAWHA	18.00	67.50	4.50	3.30	380742	812218	H	12220	09/01/88
									5.50	1.20		2.5	2390
DRIFT	2.40	37.60	54.90	KANAWHA	7.50	77.60	5.20	0.60	380744	812447	B	14070	09/01/88
									7.90	1.20		6.0	2804
DRIFT	1.70	28.60	41.90	KANAWHA	29.50	57.90	4.10	0.50	380808	812300	B	10440	09/01/88
									6.90	1.10		2.0	2804
UNDERGROUND	2.10	26.00	62.40	GREENBRIER	11.60	76.30	4.70	1.30	380820	803549	B	13500	09/01/88
									4.60	1.50		8.5	2804
UNDERGROUND	3.10	31.00	53.80	HOONE	15.20	70.10	4.80	2.90	380825	813714	B	12630	09/01/88
									5.90	1.10		6.0	2192
STRIP	3.80	37.90	58.50	BOONE	3.60	82.20	5.30	0.70	380826	814354	B	14480	09/01/88
									6.70	1.50		5.0	2651
STRIP	3.70	39.80	55.30	BOONE	4.90	79.70	5.50	0.90	380826	814355	B	14280	09/01/88
									7.50	1.50		2.5	2444

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carb.#	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
STRIP	4.40	37.10	55.20	BOONE	7.70	75.80	4.90	2.70	380836	814311	B	13730	09/01/88
									7.60	1.30		4.5	2282
STRIP	7.90	28.60	58.30	NICHOLAS	3.10	84.80	5.00	0.70	380839	803821	B	15050	09/01/88
									4.80	1.60		8.5	2804
UNDERGROUND	1.80	34.30	57.80	KANAWHA	7.90	77.60	5.3	0.80	380840	813705	B	13760	09/01/88
									7.00	1.40		4.5	2183
MORTON MINE	2.50	35.90	55.00	KANAWHA	9.10	77.30	5.00	0.80	380915	813412	B	13740	09/01/88
									6.40	1.40		6.5	2534
UNDERGROUND	3.40	34.60	55.00	KANAWHA	10.40	76.40	4.90	0.60	380918	812219	B	13590	09/01/88
									6.40	1.30		6.0	2912
UNDERGROUND	3.50	27.50	67.70	NICHOLAS	4.80	83.70	5.10	0.60	380928	804218	B	14710	09/01/88
									4.10	1.70		9.0	2804
UNDERGROUND	2.40	31.90	62.20	FAYETTE	5.90	80.40	5.10	0.70	380928	811425	B	14260	09/01/88
									6.30	1.60		8.5	2912
UNDERGROUND	2.80	37.20	58.80	KANAWHA	4.00	81.80	5.30	0.70	380941	812251	B	14530	09/01/88
									6.50	1.60		7.5	2912
NO 1 MINE	1.90	33.40	51.00	KANAWHA	15.60	71.60	4.70	0.60	380944	812249	B	12640	09/01/88
									6.30	1.20		3.5	2912
	2.30	36.60	58.30	FAYETTE	5.10	80.50	5.20	0.80	380953	811610	B	14280	09/01/88
									6.80	1.60		7.0	2912
NO 5 BLOCK MINE	4.00	33.10	56.00	FAYETTE	10.90	75.30	4.70	1.00	381012	811628	B	13390	09/01/88
									6.60	1.50		4.5	2804
UNDERGROUND	3.90	35.50	52.80	KANAWHA	11.70	74.10	5.10	0.80	381015	813507	B	13200	09/01/88
									6.70	1.60		5.5	2804
UNDERGROUND	2.00	35.10	55.70	FAYETTE	9.20	77.60	5.20	1.70	381021	811738	B	13890	09/01/88
									4.80	1.50		8.0	2480
UNDERGROUND	4.00	27.60	69.20	NICHOLAS	3.20	82.50	5.20	0.50	381022	803909	B	14950	09/01/88
									6.90	1.70		9.0	2804
UNDERGROUND	3.00	36.10	60.40	FAYETTE	3.50	83.30	5.40	0.70	381040	811216	B	14870	09/01/88
									5.50	1.60		8.5	2768
STRIP	2.60	33.60	62.00	FAYETTE	4.40	81.90	5.60	0.80	381054	805858	B	14750	09/01/88
									5.20	2.00		9.0	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
CANNELTON CO MINE	1.70	36.40	62.10	FAYETTE	85.30	5.40	0.50	381055	811332	B	15260	09/01/88
								5.70	1.50		9.0	2624
SEMET-SOLWAY STRIP MINE	3.20	34.10	57.90	FAYETTE	77.80	4.80	0.50	381055	811639	B	13820	09/01/88
								7.40	1.40		1.5	2804
STRIP	4.00	36.10	53.10	KANAWHA	73.00	4.80	1.80	381108	813141	B	13170	09/01/88
								8.20	1.40		6.5	2804
UNDERGROUND	3.10	29.20	66.30	NICHOLAS	83.10	5.30	0.90	381134	804003	B	14750	09/01/88
								4.40	1.80		9.0	2806
UNDERGROUND	3.30	28.50	64.40	NICHOLAS	80.00	5.00	1.50	381135	804142	B	14260	09/01/88
								4.60	1.70		9.0	2804
UNDERGROUND	2.10	36.90	53.40	KANAWHA	76.70	5.10	0.80	381139	812056	B	13620	09/01/88
								6.40	1.30		7.0	2912
UNDERGROUND	2.70	35.60	53.20	KANAWHA	76.20	4.80	0.50	381152	813531	B	13450	09/01/88
								5.90	1.40		4.0	2912
UNDERGROUND	2.80	35.20	53.80	FAYETTE	85.00	5.30	0.70	381203	811444	B	15060	09/01/88
								6.30	1.70		8.0	2246
UNDERGROUND	3.10	34.60	51.90	KANAWHA	71.60	4.70	2.70	381211	813502	B	12830	09/01/88
								6.30	1.20		5.5	2453
UNDERGROUND	1.80	33.60	50.30	FAYETTE	71.10	4.80	1.00	381231	311146	B	12700	09/01/88
								5.60	1.40		7.0	2912
UNDERGROUND	2.60	30.10	66.90	NICHOLAS	84.00	5.10	0.80	381236	804041	B	14910	09/01/88
								5.40	1.70		9.0	2552
UNDERGROUND	2.30	34.40	56.20	FAYETTE	77.90	5.00	0.70	381242	811640	B	13820	09/01/88
								5.50	1.50		6.0	2912
UNDERGROUND	2.30	36.30	61.70	FAYETTE	83.80	5.40	0.70	381244	811639	B	14930	09/01/88
								6.40	1.70		8.0	2534
UNDERGROUND	2.30	35.10	54.80	KANAWHA	76.50	5.00	0.70	381255	812040	B	13580	09/01/88
								6.20	1.50		7.5	2480
	4.70	37.30	50.30	LINCOLN	71.10	4.80	0.80	381310	821207	B	12630	09/01/88
								9.50	1.40		3.0	2912
CANNELTON CO MINE	1.00	35.40	58.80	FAYETTE	80.90	5.10	0.60	381332	811055	B	14550	09/01/88
								6.00	1.60		8.5	2804

Coal Field Information Printout for: WV - West Virginia

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Rank	Free Swell	Hemi Temp			
-----															
CANNELTON CO MINE		FAYETTE		67.20	D182640		381332	811355	B		12110	09/01/88			
1.50	31.00	49.00	20.00		4.40	2.40	4.80	1.20			8.0	2759			
-----															
CANNELTON CO MINE		FAYETTE		72.00	D182636		381337	811557	B		12700	09/01/88			
2.50	31.60	53.30	15.10		4.50	0.50	6.60	1.30			4.5	2804			
-----															
UNDERGROUND		KANAWHA		80.00	W190631		381345	811952	B		14240	09/01/88			
3.00	36.50	57.70	5.80		5.20	1.10	6.30	1.60			7.5	2732			
-----															
UNDERGROUND		NICHOLAS		83.30	W210324		381350	804145	B		14680	09/01/88			
3.40	29.00	66.40	4.60		4.90	0.70	4.70	1.80			9.0	2804			
-----															
UNDERGROUND		NICHOLAS		84.10	W210189		381355	803805	B		14950	09/01/88			
3.60	28.90	67.80	3.30		5.00	0.60	5.30	1.70			9.0	2804			
-----															
UNDERGROUND		KANAWHA		81.70	W190626		381411	811619	B		14620	09/01/88			
1.70	38.10	57.00	4.90		5.30	1.10	5.40	1.60			7.5	2669			
-----															
8.20		33.40	52.20	65.50	W188990		381411	812158	B		10900	09/01/88			
			14.40		4.10	0.50	14.50	1.00			0.0	2912			
-----															
UNDERGROUND		KANAWHA		77.90	W190628		381420	811854	B		13920	09/01/88			
2.00	38.70	52.50	8.80		5.20	0.70	5.90	1.50			5.5	2912			
-----															
STRIP		NICHOLAS		78.90	W210282		381432	810809	B		14260	09/01/88			
3.70	34.60	58.00	7.40		5.10	0.70	6.20	1.70			8.0	2804			
-----															
UNDERGROUND		KANAWHA		78.70	W190630		381441	311921	B		14000	09/01/88			
2.50	35.90	56.00	8.10		5.20	1.00	5.50	1.50			7.5	2453			
-----															
UNDERGROUND		FAYETTE		78.20	W190623		381458	811254	B		13980	09/01/88			
2.50	35.70	56.20	8.10		5.20	0.80	6.10	1.60			8.0	2912			
-----															
UNDERGROUND		KANAWHA		76.00	W190615		381538	812848	B		13520	09/01/88			
3.40	36.40	54.50	9.10		4.90	1.00	7.40	1.60			4.5	2912			
-----															
UNDERGROUND		KANAWHA		79.10	W190610		381541	812822	B		14150	09/01/88			
3.50	38.50	55.20	6.30		5.20	1.00	6.90	1.50			6.0	2912			
-----															
VALLEY CAMP NO 35 MINE		KANAWHA		76.30	D170194		381545	812826	B		13320	09/01/88			
3.60	33.10	56.10	10.80		4.70	0.70	6.00	1.50			3.0	2912			
-----															
UNDERGROUND		NICHOLAS		83.10	W210181		381557	804407	B		14830	09/01/88			
3.10	31.30	64.90	3.80		5.10	0.70	5.60	1.70			8.5	2642			
-----															
UNDERGROUND		KANAWHA		74.20	W190609		381559	812207	B		13080	09/01/88			

## Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
UNDERGROUND	3.80	37.20	53.00	KANAWHA	9.80	75.50	4.90	0.90	381611	812758	B	13420	09/01/88
									7.40	1.50		5.5	2912
SURFACE	2.60	40.20	54.50	KANAWHA	5.30	79.70	5.20	0.70	381612	812829	B	14180	09/01/88
									7.50	1.60		5.5	2912
UNDERGROUND	3.10	34.50	52.00	KANAWHA	13.50	72.80	4.80	0.70	381617	812315	B	12820	09/01/88
									6.90	1.30		5.0	2912
UNDERGROUND	2.50	32.40	49.30	KANAWHA	18.30	67.10	4.70	0.80	381617	812828	B	11750	09/01/88
									8.20	0.90		1.0	2723
UNDERGROUND	2.50	30.20	58.00	NICHOLAS	11.80	75.70	4.70	3.90	381626	810138	B	13260	09/01/88
									2.40	1.50		8.0	2462
UNDERGROUND	2.40	36.30	52.90	KANAWHA	10.80	75.60	5.00	0.60	381628	812132	B	13410	09/01/88
									6.70	1.30		5.5	2912
NO 1 MINE, DOUGLAS EAGLE CC	3.20	32.00	61.90	NICHOLAS	6.10	81.10	5.00	2.30	381645	810031	B	14240	09/01/88
									4.00	1.50		8.5	2842
DRIFT	3.50	28.80	48.80	KANAWHA	22.40	65.20	4.20	0.60	381650	811652	B	11490	09/01/88
									6.50	1.10		3.5	2804
UNDERGROUND	2.10	31.70	64.60	NICHOLAS	3.70	83.90	5.20	0.80	381705	803924	B	14830	09/01/88
									4.80	1.60		8.5	2597
UNDERGROUND	3.10	31.60	48.50	KANAWHA	19.90	66.10	4.40	0.60	381728	812328	B	11710	09/01/88
									7.80	1.20		3.0	2912
DRIFT	2.80	31.30	55.70	NICHOLAS	13.00	73.40	4.80	1.50	381730	805456	B	13180	09/01/88
									5.90	1.40		8.5	2804
	6.10	29.50	52.70	KANAWHA	17.80	62.60	3.90	0.50	381732	812141	B	10430	09/01/88
									14.10	1.10		0.0	2912
UNDERGROUND	4.20	31.40	59.90	NICHOLAS	8.70	77.70	4.70	1.50	381742	805057	B	13790	09/01/88
									5.80	1.60		7.5	2084
DRIFT	3.20	35.30	62.50	NICHOLAS	2.20	84.10	5.40	0.60	381743	805511	B	15010	09/01/88
									6.00	1.70		9.0	2507
STRIP	2.90	34.60	55.90	NICHOLAS	9.50	76.60	5.20	0.90	381745	804556	B	13780	09/01/88
									6.00	1.80		8.5	2570
DRIFT	2.90	32.90	62.40	NICHOLAS	4.70	81.80	5.10	0.70	381751	804213	B	14520	09/01/88
									6.10	1.60		9.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.30	30.10	64.30	NICHOLAS	5.60	81.70	5.10	1.00	381804	804239	B	14460	09/01/88
									5.00	1.60		8.5	2498
STRIP	8.00	31.00	61.30	NICHOLAS	7.70	78.50	4.90	0.70	381821	805319	B	13990	09/01/88
									6.60	1.50		8.0	2804
HOLE B-88	2.70	37.80	40.70	KANAWHA	21.50	59.90	4.60	7.00	381836	814353	B	10990	09/01/88
									6.00	1.00		4.5	2102
MINE 2A, PEERLESS EAGLE CC	2.40	35.20	59.10	NICHOLAS	5.70	80.70	5.20	1.30	381902	805154	B	14240	09/01/88
									5.50	1.60		9.0	2282
UNDERGROUND	2.20	34.60	57.00	NICHOLAS	8.40	77.90	4.80	1.20	381805	805302	B	13860	09/01/88
									6.40	1.30		8.0	2201
NO 1 MINE, STAR COAL CO	3.30	32.60	56.90	NICHOLAS	10.50	76.70	4.80	0.60	381906	805355	B	13580	09/01/88
									6.00	1.40		8.0	2849
	1.60	25.90	46.20	KANAWHA	27.90	58.70	4.00	0.70	381908	811712	B	10240	09/01/88
									7.70	1.00		1.5	2912
	4.20	32.30	47.80	KANAWHA	19.90	65.70	4.40	1.40	381912	811756	B	11610	09/01/88
									7.30	1.30		1.5	2678
UNDERGROUND	2.10	33.80	55.40	NICHOLAS	10.80	76.20	4.90	2.10	381933	805141	B	13520	09/01/88
									4.50	1.50		8.5	2912
STRIP	2.70	34.90	62.80	NICHOLAS	2.30	83.60	5.30	0.80	381935	804234	B	14880	09/01/88
									6.20	1.80		8.5	2804
STRIP	4.10	33.90	59.30	NICHOLAS	6.80	79.90	5.10	0.60	381939	805008	B	14230	09/01/88
									5.90	1.70		8.0	2804
UNDERGROUND	3.50	33.30	58.90	NICHOLAS	7.80	79.50	5.00	0.50	381939	805400	B	14030	09/01/88
									5.70	1.50		8.0	2912
UNDERGROUND	3.20	36.70	56.30	NICHOLAS	7.00	79.40	5.20	1.50	381948	805538	B	14120	09/01/88
									5.40	1.50		8.5	2453
	3.00	35.80	48.50	KANAWHA	15.70	69.60	4.50	1.20	381952	812201	B	12360	09/01/88
									7.70	1.30		5.0	2912
NO 2 MINE, PHILLIPS RUN CC	2.60	34.10	56.10	NICHOLAS	9.80	76.40	4.90	0.70	382001	804852	B	13680	09/01/88
									6.70	1.50		8.5	2192
STRIP	3.00	33.60	55.70	NICHOLAS	10.70	75.90	5.00	1.10	382047	804751	B	13400	09/01/88
									6.00	1.30		8.5	2264



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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
DRIFT	2.00	30.60	52.30	NICHOLAS	17.10	70.40	W210279	382050	805306	B	12520	09/01/88
							4.60	5.70	1.30		8.0	2786
NO 2 MINE, BIG FORK COAL CO	1.20	32.50	52.80	NICHOLAS	14.70	72.50	W187029	382330	804901	B	12830	09/01/88
							4.50	6.20	1.40		5.0	2912
STRIP	2.90	35.20	50.60	WEBSTER	14.20	70.20	W190565	382457	802405	B	12610	09/01/88
							5.00	7.20	1.40		5.0	2615
STRIP	3.70	36.60	61.50	WEBSTER	1.90	83.60	W190565	382527	803103	B	15070	09/01/88
							5.70	6.40	1.60		9.0	2282
STRIP	3.60	32.40	48.90	NICHOLAS	18.70	68.20	W210273	382528	804912	B	12080	09/01/88
							4.50	6.40	1.20		4.5	2804
UNDERGROUND	3.50	32.60	48.20	NICHOLAS	19.20	67.30	W210327	382555	805220	B	12010	09/01/88
							4.50	7.00	1.20		8.0	2804
STRIP	2.10	33.30	53.20	WEBSTER	13.50	71.50	W190670	382605	803456	B	13010	09/01/88
							5.00	4.00	1.40		9.0	2030
STRIP	5.20	34.80	62.90	WEBSTER	2.30	83.50	W190667	382632	803106	B	15000	09/01/88
							5.50	6.50	1.60		9.0	2309
UNDERGROUND	2.80	32.20	64.60	WEBSTER	3.20	84.30	W210183	382641	802036	B	15020	09/01/88
							5.20	5.10	1.40		8.5	2804
STRIP	4.00	29.60	62.80	WEBSTER	7.60	78.80	W210186	382645	802229	B	13860	09/01/88
							4.70	6.70	1.50		7.0	2804
STRIP	2.50	30.80	63.10	WEBSTER	6.10	82.00	W211557	382650	802040	B	14520	09/01/88
							5.00	4.80	1.50		7.0	0
UNDERGROUND	2.40	26.70	64.20	WEBSTER	9.10	79.10	W190671	382651	802510	B	13680	09/01/88
							4.60	6.00	0.80		6.5	2912
UNDERGROUND	3.90	37.90	48.50	CLAY	13.60	70.70	W190642	382651	810806	B	12730	09/01/88
							5.00	5.80	1.20		6.5	2192
STRIP	2.70	36.50	60.90	WEBSTER	2.60	83.40	W210179	382657	802734	B	14970	09/01/88
							5.40	5.80	1.80		8.5	2138
STRIP	2.20	30.00	65.70	WEBSTER	4.30	83.30	W190672	382752	801945	B	14820	09/01/88
							5.50	5.00	1.10		9.0	2669
STRIP	3.10	34.00	59.20	WEBSTER	6.80	79.40	W190669	382854	803729	B	13970	09/01/88
							5.10	7.10	1.00		8.0	2912

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Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
OUTCROP	1.20	28.90	58.50	12.60	WEBSTER	74.70	4.80	0.40	W190680	382932	802509	B	13270	09/01/88
										6.50	0.90		4.5	2912
OUTCROP	2.90	27.40	55.80	16.80	WEBSTER	69.30	4.50	0.60	W190681	382936	802509	B	12160	09/01/88
										8.20	0.60		5.0	2912
OUTCROP	2.30	28.10	55.90	5.00	WEBSTER	80.40	5.00	0.60	W190682	382942	802509	B	14180	09/01/88
										7.00	1.00		9.0	2912
OUTCROP	6.40	27.80	58.50	13.70	WEBSTER	72.10	4.70	0.60	W190688	383254	803527	B	12590	09/01/88
										8.00	0.80		1.0	2912
UNDERGROUND	2.60	31.90	60.90	7.20	RANDOLPH	80.70	5.10	0.60	W210342	383258	801050	B	14380	09/01/88
										5.10	1.30		8.0	2804
UNDERGROUND	3.20	29.20	63.90	6.90	RANDOLPH	81.10	4.90	1.00	W210341	383521	800641	B	14320	09/01/88
										4.80	1.30		8.5	2804
STRIP	3.80	34.10	62.40	3.50	RANDOLPH	83.30	5.30	0.70	W210325	383634	800929	B	14890	09/01/88
										5.50	1.70		8.5	2228
STRIP	4.40	38.00	55.90	6.10	BRAXTON	77.60	5.30	1.60	W194951	384031	805145	B	13970	09/01/88
										8.00	1.40		7.5	2057
UNDERGROUND	3.20	30.20	65.00	3.80	RANDOLPH	84.20	5.10	0.50	W211658	384123	800842	B	14860	09/01/88
										4.90	1.50		8.0	0
UNDERGROUND	2.90	28.00	65.60	6.40	RANDOLPH	80.90	4.70	1.10	W210325	384124	800849	B	14250	09/01/88
										5.70	1.20		7.5	2804
STRIP	4.80	31.20	55.10	13.70	UPSHUR	72.20	4.70	0.60	W194956	384645	802116	B	12760	09/01/88
										7.40	1.40		1.5	2804
STRIP	2.60	25.10	68.80	8.10	GREENBRIER	79.20	4.70	1.80	W210193	385000	803258	B	14200	09/01/88
										4.50	1.70		9.0	2507
STRIP	3.30	32.40	52.80	14.80	UPSHUR	72.10	4.80	0.70	W1-4957	385020	801228	B	12810	09/01/88
										6.30	1.30		8.5	2804
STRIP	3.00	39.40	53.10	7.50	BRAXTON	76.40	5.40	2.00	W206563	385133	804413	B	13650	09/01/88
										7.40	1.30		6.0	2264
STRIP	4.10	37.90	51.60	10.50	GILMER	72.70	4.90	3.00	W206561	385426	804737	B	13140	09/01/88
										7.60	1.30		4.0	2111
STRIP	2.30	40.50	53.10	6.40	GILMER	77.40	5.30	2.10	W206562	385458	804718	B	13860	09/01/88
										7.40	1.40		6.5	2246

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Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash						Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
HOLE NO TB47R				LEWIS			W210194	3.90	385528	802827	B	13930	09/01/88
2.10	41.70	51.70	6.60		76.50	5.30			6.60	1.10		8.0	2066
UNDERGROUND				GILMER			W206560	3.10	385540	804759	B	13350	09/01/88
3.10	39.50	51.20	9.30		74.00	5.00			7.30	1.30		4.0	2102
HOLE NO S-5				LEWIS			W206588	5.20	385612	802950	B	13070	09/01/88
3.00	39.10	49.10	11.80		71.30	5.10			5.40	1.20		7.0	2012
UNDERGROUND				MASON			W189283	4.10	385630	820247	B	10870	09/01/88
3.60	35.60	42.90	21.50		60.10	4.40			9.20	0.70		1.0	2192
HOLE CS NO 1				LEWIS			W206589	0.50	385652	803103	B	13380	09/01/88
1.80	33.50	54.30	12.20		75.70	4.80			5.40	1.40		5.0	2471
STRIP				LEWIS			W206578	3.20	385828	802308	B	13330	09/01/88
3.10	41.00	48.90	10.10		73.80	5.40			6.20	1.30		6.5	2147
6.30	19.60	68.00	12.40	TUCKER			W190923	2.70	385845	792200	B	13600	09/01/88
					78.00	4.20			1.60	1.10		8.0	2354
HOLE CS NO 2				LEWIS			W206580	4.50	385846	802824	B	13420	09/01/88
2.40	40.30	50.00	9.70		73.70	5.40			5.40	1.30		7.5	2003
UNDERGROUND				FAYETTE			W210330	0.80	385905	812128	B	14870	09/01/88
2.20	32.00	63.30	4.70		83.50	5.20			4.40	1.60		7.5	2804
9.40	19.50	66.90	13.60	TUCKER			W190924	1.80	390010	792115	B	13190	09/01/88
					76.30	4.00			3.10	1.20		4.0	2138
STRIP				UPSHUR			W194983	3.60	390011	801756	B	13840	09/01/88
3.50	39.50	52.50	8.00		76.20	5.20			5.90	1.10		8.0	2102
HOLE NO 93				LEWIS			W206565	4.00	390012	802824	B	13320	09/01/88
3.40	39.00	51.40	9.60		73.90	9.40			2.00	1.10		5.0	2021
STRIP				LEWIS			W206579	2.70	390109	804252	B	13310	09/01/88
2.90	42.30	48.10	9.60		74.20	5.00			7.20	1.30		6.5	2335
3.00	22.70	59.90	17.40	TUCKER			W190926	6.30	390115	792100	B	12640	09/01/88
					70.00	4.00			1.20	1.10		9.0	2039
STRIP				LEWIS			W194981	3.20	390119	802053	B	13930	09/01/88
2.40	41.20	51.00	7.80		76.30	5.30			6.20	1.20		7.5	2138
STRIP				LEWIS			W206577	2.80	390203	802343	B	13990	09/01/88
2.40	42.00	52.30	5.70		78.20	5.50			6.60	1.20		7.5	2192

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	2.50	42.50	47.80	LEWIS	9.70	72.80	5.40	3.80	W205580	390231	804320	B	13300	09/01/88
										7.10	1.20		6.0	2111
STRIP	2.00	38.40	55.90	UPSHUR	5.70	78.80	5.40	2.20	W205575	390233	801343	B	14100	09/01/88
										6.60	1.30		8.5	2111
STRIP	3.20	40.20	51.20	LEWIS	8.60	75.00	5.20	2.70	W205586	390244	803552	B	13450	09/01/88
										7.30	1.20		6.5	2156
STRIP	3.50	36.20	47.10	UPSHUR	16.70	68.30	4.70	4.10	W194978	390257	801111	B	12500	09/01/88
										5.10	1.10		8.5	2255
STRIP	2.10	39.20	54.30	UPSHUR	6.50	78.70	5.30	1.80	W194977	390312	801245	B	14220	09/01/88
										6.30	1.40		8.5	2219
STRIP	3.30	41.70	51.20	LEWIS	7.10	75.70	5.20	3.70	W205581	390321	803802	B	13540	09/01/88
										7.10	1.20		7.5	2111
STRIP	2.10	41.80	51.50	LEWIS	6.90	77.10	5.20	3.20	W194982	390341	802303	B	14000	09/01/88
										6.50	1.10		7.5	2111
UNDERGROUND	2.80	30.20	54.10	BARBOUR	15.70	71.90	4.50	1.90	W194952	390348	800609	B	12770	09/01/88
										4.80	1.20		7.5	2642
STRIP	4.30	38.20	50.20	LEWIS	11.60	72.50	4.90	2.30	W194979	390405	802056	B	13070	09/01/88
										7.60	1.10		8.0	2354
STRIP	1.90	41.10	52.50	LEWIS	6.40	78.30	5.30	2.30	W194980	390448	801932	B	14180	09/01/88
										6.60	1.10		7.5	2192
UNDERGROUND	2.60	40.20	52.60	BARBOUR	7.20	77.60	5.50	3.00	W205582	390629	801053	B	14100	09/01/88
										5.20	1.50		8.0	2048
STRIP	2.80	36.40	57.30	BARBOUR	6.30	79.40	5.20	0.90	W194973	390631	801237	B	14250	09/01/88
										6.70	1.50		9.0	2804
STRIP	1.70	42.70	50.50	HARRISON	6.80	77.20	5.50	3.30	W194974	390643	801734	B	14150	09/01/88
										6.10	1.10		8.5	2138
UNDERGROUND	2.10	38.40	51.60	UPSHUR	10.00	74.30	5.20	3.30	W205553	390647	801400	B	13420	09/01/88
										5.90	1.30		8.5	2102
STRIP	2.50	38.60	51.00	BARBOUR	10.40	75.00	5.20	2.80	W194976	390648	800853	B	13580	09/01/88
										5.30	1.30		9.0	2246
UNDERGROUND	2.20	36.50	56.00	BARBOUR	7.50	77.50	5.30	2.20	W205555	390658	800842	B	13870	09/01/88
										6.10	1.40		9.0	2102

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	2.40	35.50	56.60	BARBOUR	7.90	78.20	W194975	1.60	390702	800847	B	14000	09/01/88
							5.20	5.80	5.80	1.30		9.0	2318
STRIP	3.10	39.60	53.90	HARRISON	6.50	77.10	W206576	2.20	390705	802142	B	13870	09/01/88
							5.20	7.70	7.70	1.30		7.5	2210
STRIP	2.30	37.40	54.30	HARRISON	8.30	76.50	W206574	2.00	390720	801351	B	13690	09/01/88
							5.40	6.40	6.40	1.40		8.5	2147
UNDERGROUND	1.50	40.40	49.40	BARBOUR	10.20	76.30	W206573	5.30	390730	801308	B	13370	09/01/88
							5.30	1.60	1.60	1.30		8.0	2111
STRIP	3.00	38.20	52.10	BARBOUR	9.70	74.70	W194965	4.90	390732	800815	B	13690	09/01/88
							5.10	4.30	4.30	1.30		9.0	2057
UNDERGROUND	2.80	37.50	53.40	BARBOUR	9.00	76.00	W206554	2.70	390735	800928	B	13580	09/01/88
							5.10	5.90	5.90	1.30		8.5	2156
STRIP	2.70	37.30	53.00	BARBOUR	9.70	75.40	W194964	3.30	390740	800754	B	13660	09/01/88
							5.00	5.40	5.40	1.20		9.0	2147
STRIP	3.30	36.40	57.10	BARBOUR	6.50	79.20	W194962	3.30	390756	801221	B	14120	09/01/88
							5.20	4.40	4.40	1.40		9.0	2543
STRIP	2.60	41.90	52.10	HARRISON	6.00	76.90	W210340	3.70	390803	802140	B	14070	09/01/88
							5.40	6.70	6.70	1.30		8.0	2021
STRIP	1.20	38.40	53.70	BARBOUR	7.90	76.70	W189284	2.20	390807	801025	B	13830	09/01/88
							5.30	6.80	6.80	1.10		9.0	2462
STRIP	3.50	39.50	49.40	BARBOUR	11.10	74.30	W194963	4.10	390820	801228	B	13580	09/01/88
							5.10	4.10	4.10	1.30		8.0	2057
STRIP	2.80	36.60	55.90	BARBOUR	7.50	78.30	W194972	1.70	390821	801006	B	14090	09/01/88
							5.20	6.00	6.00	1.30		9.0	2255
STRIP	1.60	41.30	51.30	BARBOUR	7.40	77.30	W206572	2.70	390859	801303	B	13990	09/01/88
							5.40	5.80	5.80	1.40		9.0	2156
UNDERGROUND	2.10	36.20	53.20	BARBOUR	10.60	74.80	W206568	1.80	390911	801104	B	13370	09/01/88
							5.00	6.40	6.40	1.40		9.0	2246
UNDERGROUND	1.30	36.80	54.30	BARBOUR	8.90	75.60	W189285	2.40	390927	801019	B	13670	09/01/88
							5.30	6.80	6.80	1.00		9.0	2345
UNDERGROUND	1.60	31.10	48.90	BARBOUR	20.00	67.80	W194953	1.50	390945	795937	B	12230	09/01/88
							4.50	4.80	4.80	1.40		8.5	2804

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Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Oxygen	Longitude	Rank	Htg Val	Free Swell	Last Chg
UNDERGROUND	1.90	31.20	53.80	BARBOUR	15.00	71.50	4.90	W194954	3.70	390949	3.50	800313	B	12920	9.0	09/01/88
																2246
STRIP	3.70	33.50	58.60	BARBOUR	7.90	77.60	5.10	W206567	1.10	391035	6.80	800639	B	13740	9.0	09/01/88
																2714
STRIP	1.80	40.70	51.40	HARRISON	7.90	76.30	5.30	W210197	2.90	391050	6.30	802146	B	13800	7.5	09/01/88
																2102
STRIP	1.70	38.40	50.60	BARBOUR	11.00	73.60	5.00	W206569	3.30	391052	5.80	801145	B	13310	8.5	09/01/88
																2201
STRIP	1.00	38.10	54.30	BARBOUR	7.60	78.70	5.40	W194969	1.80	391103	4.90	800732	B	14260	9.0	09/01/88
																2219
STRIP	3.10	35.90	55.80	BARBOUR	8.30	76.80	5.00	W194970	2.90	391105	5.70	800722	B	13890	9.0	09/01/88
																2318
STRIP	2.30	33.70	53.00	BARBOUR	13.30	72.70	4.90	W194971	2.70	391122	5.10	800621	B	13120	9.0	09/01/88
																2237
STRIP	3.60	36.70	56.70	BARBOUR	6.60	77.80	5.20	W194968	1.80	391130	7.10	800931	B	14060	9.0	09/01/88
																2408
STRIP	1.40	29.90	51.10	BARBOUR	19.00	68.60	4.60	W206571	2.90	391151	3.70	800308	B	12250	8.0	09/01/88
																2273
STRIP	3.10	36.80	50.40	BARBOUR	12.80	72.90	4.80	W194966	3.30	391151	5.00	801127	B	13090	8.5	09/01/88
																2111
STRIP	2.70	36.70	52.10	HARRISON	11.20	73.00	4.80	W206570	3.60	391255	6.20	801232	B	13140	8.5	09/01/88
																2147
STRIP	2.70	38.10	53.20	BARBOUR	8.70	76.50	5.20	W194960	3.70	391353	4.60	801015	B	13890	9.0	09/01/88
																2255
STRIP	1.50	37.10	55.40	TAYLOR	7.50	77.80	5.20	W194959	1.60	391444	6.40	800722	B	14180	9.0	09/01/88
																2156
OUTCROP	1.50	36.40	48.90	HARRISON	14.70	69.70	4.90	W189280	2.80	391652	6.90	801701	B	12590	9.0	09/01/88
																2156
STRIP	2.70	37.40	56.40	TAYLOR	6.20	79.50	5.40	W194958	0.40	391917	6.90	800416	B	14390	9.0	09/01/88
																2246
UNDERGROUND	2.70	36.10	57.00	MARION	6.90	78.50	5.20	W206584	0.90	392954	6.90	801202	B	13940	8.0	09/01/88
																2291

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND				MARION									
2.70	39.30	54.00	6.70	78.40	5.30	2.60	393005	801111	B	14090	9.0	2210	09/01/88
UNDERGROUND				MARION									
2.40	38.20	54.90	6.90	78.90	5.40	1.40	393045	801123	B	14100	8.5	2408	09/01/88
UNDERGROUND				MARION									
1.80	39.10	53.60	7.30	77.60	5.30	2.70	393100	801203	B	13860	9.0	2147	09/01/88
STRIP				PRESTON									
0.90	27.00	62.50	10.50	77.30	4.90	1.50	393430	793824	B	13780	9.0	2687	09/01/88
DIPPEL&DIPPEL STRIP				MONONGALIA									
1.20	28.30	35.60	36.10	51.10	3.80	2.10	393730	800300	B	9220	4.0	2804	09/01/88
STRIP				MONONGALIA									
1.70	32.30	56.10	11.60	73.00	5.10	1.20	393730	800329	B	13050	5.5	2444	09/01/88
STRIP				MONONGALIA									
7.10	33.80	54.50	11.70	72.40	4.90	1.10	393804	795340	B	12710	2.0	2516	09/01/88
				MONONGALIA									
1.60	21.00	43.30	35.70	55.00	3.50	1.40	393941	795038	B	9650	1.0	2804	09/01/88
DIPPEL&DIPPEL STRIP				MONONGALIA									
1.20	31.10	42.10	26.80	60.50	4.40	0.80	394143	800100	B	10810	6.0	2804	09/01/88
STRIP				MONONGALIA									
2.10	35.40	46.70	17.90	66.80	4.80	3.90	394155	800108	B	12160	8.0	2372	09/01/88
HOLE 5				LEWIS									
1.80	37.40	46.70	15.90	59.80	4.90	1.60	395451	802640	B	12540	5.5	2750	09/01/88
STRIP MINE				LEWIS									
7.00	28.70	41.50	29.80	56.10	4.10	2.00	401410	803222	B	10010	3.0	2678	09/01/88
STRIP				BROOKE									
6.10	37.80	55.20	7.00	76.00	5.00	1.60	401906	803300	B	13530	7.0	2354	09/01/88
STRIP				BROOKE									
4.80	38.10	53.30	8.60	75.00	5.10	2.40	401950	803138	B	13270	6.5	2138	09/01/88

Coal Field Information Printout for  
WY - Wyoming



Coal Field Information Printout for: WY - Wyoming

Location Moisture	Volatiles	Fixed Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
14.70	36.10	53.10	10.80	66.80	4.70	0.70	411245 15.20	1073045 1.80	SB	11460 0.0	09/01/88 2444
27.40	43.40	33.70	22.90	49.10	2.80	1.10	411432 22.70	1072938 1.40	SB	7410 0.0	09/01/88 2453
17.50	33.50	50.50	16.00	63.10	4.10	0.60	411548 14.50	1073342 1.70	SB	10820 0.0	09/01/88 2354
15.00	34.90	47.90	17.20	61.70	4.30	0.60	411610 14.70	1073215 1.50	SB	10650 0.0	09/01/88 2804
17.70	34.30	44.00	21.70	58.90	4.30	0.60	411829 13.40	1073231 1.10	SB	10210 0.0	09/01/88 2615
13.80	36.40	52.30	11.30	67.20	4.60	0.50	412014 15.00	1073420 1.40	SB	11640 0.0	09/01/88 2462
15.50	34.00	47.50	18.50	61.00	4.00	0.70	412125 14.50	1073039 1.30	SB	10500 0.0	09/01/88 2759
1.20	25.10	57.30	17.60	71.90	4.40	0.80	412230 3.60	1075230 1.70	B	12780 9.0	09/01/88 2732
27.00	45.10	45.10	9.80	58.80	3.30	0.80	412230 25.50	1083730 1.80	SB	9030 0.0	09/01/88 0
34.70	43.40	37.20	19.40	51.70	3.10	0.60	412230 23.70	1084500 1.50	SB	7960 0.0	09/01/88 0
14.20	38.80	51.80	9.40	68.20	4.80	0.50	412325 15.70	1073118 1.40	SB	11780 0.0	09/01/88 2516
21.60	36.50	47.90	15.60	62.20	3.80	0.60	413024 16.80	1073908 1.00	SB	10250 0.0	09/01/88 2264
NO 7 SEAM STRIP MINE 8.50	40.30	52.70	7.00	72.70	5.00	0.90	413040 12.70	1091330 1.70	B	12680 0.5	09/01/88 2912
22.40	39.00	52.10	8.90	66.80	4.10	0.50	413046 18.70	1073856 1.00	SB	11070 0.0	09/01/88 2201
10.40	42.50	51.50	6.00	73.80	5.20	1.00	413111 12.20	1091326 1.80	SB	13080 0.0	09/01/88 2246
20.50	37.70	48.10	14.20	62.20	4.10	1.80	413112 16.70	1073758 1.00	SB	10310 0.0	09/01/88 2255

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrog n	Cor's Number	Latitude	Longitude	Rank	Htg Val	Last Chg
								Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
23.40	38.10	48.10	48.10	CARBON	13.80	62.70	3.90	0.80	413136	1073759	SB	10460	09/01/88
									17.90	0.90		0.0	2309
25.20	37.30	49.30	49.30	CARBON	13.40	62.70	4.10	0.70	413152	1073712	SB	10440	09/01/88
									18.20	0.90		0.0	2228
9.50	41.50	54.10	54.10	SWEETWATER	4.40	74.30	5.00	0.90	413325	1091235	B	12970	09/01/88
									14.80	0.60		0.5	2192
14.40	36.70	54.30	54.30	SWEETWATER	9.00	67.90	4.20	0.80	413340	1091247	B	11360	09/01/88
									16.90	1.20		0.0	2912
SWANSON DEEP MINE													
10.20	39.30	49.20	49.20	SWEETWATER	11.50	67.70	4.60	1.20	413345	1091250	B	11850	09/01/88
									14.10	0.90		0.5	2912
17.50	32.00	35.00	35.00	CARBON	33.00	47.70	3.60	1.70	413413	1074539	SB	8060	09/01/88
									13.00	1.00		0.0	2363
19.50	32.90	32.70	32.70	CARBON	34.40	42.70	3.30	4.60	413450	1074441	SB	7220	09/01/88
									14.10	0.90		0.0	2201
19.60	36.10	37.20	37.20	CARBON	26.70	47.50	3.50	5.30	413501	1074505	SB	8090	09/01/88
									16.00	1.00		0.0	2158
21.20	32.40	30.60	30.60	CARBON	37.00	41.40	3.00	3.70	413505	1074447	SB	5960	09/01/88
									14.00	0.90		0.0	2327
SWANSON DEEP MINE													
11.70	41.10	54.60	54.60	SWEETWATER	4.30	75.00	5.00	1.10	413555	1091020	B	13010	09/01/88
									13.40	1.20		0.5	2154
38.80	44.90	46.40	46.40	CARBON	8.70	60.50	3.10	0.30	413700	1073410	SB	9130	09/01/88
									26.30	1.10		0.0	2201
24.50	38.70	51.80	51.80	CARBON	9.50	66.80	3.80	1.10	413725	1073440	SB	11150	09/01/88
									17.90	0.90		0.0	2147
41.60	45.70	45.80	45.80	CARBON	8.40	60.70	3.20	0.30	413733	1073427	SB	9040	09/01/88
									26.20	1.20		0.0	2300
20.50	31.20	30.40	30.40	CARBON	38.40	44.10	3.00	0.50	413740	1073403	SB	7190	09/01/88
									13.40	0.60		0.0	2264
39.50	43.30	48.40	48.40	CARBON	8.30	61.50	3.20	0.20	413815	1073335	SB	9400	09/01/88
									25.80	1.00		0.0	2201
43.40	42.40	43.30	43.30	CARBON	14.30	56.80	3.10	0.50	413821	1073327	SB	8550	09/01/88
									24.40	0.90		0.0	2102

Coal Field Information Printout for: WY - Wyoming

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardrove	Htg Val Free Swell	Last Chg Hemi Temp
30.00	34.60	47.40	CARBON	18.00	60.70	4.20	413840	1073238	SB	10230	09/01/88
							14.90	0.90		0.0	2246
23.20	38.80	50.70	CARBON	10.50	65.70	4.30	413903	1073218	SB	10980	09/01/88
							17.80	0.80		0.0	2048
41.60	45.50	47.30	CARBON	7.20	61.60	3.00	413910	1073920	SB	9230	09/01/88
							27.10	0.90		0.0	2084
42.60	48.20	41.30	SWEETWATER	10.50	59.30	2.60	413935	1073830	SB	8820	09/01/88
							26.50	0.90		0.0	2183
36.30	44.30	45.20	SWEETWATER	10.50	50.20	3.20	413935	1073900	SB	9140	09/01/88
							24.70	0.90		0.0	2165
25.80	45.80	46.00	SWEETWATER	8.20	68.80	4.80	413947	1073118	SB	11790	09/01/88
							16.50	0.80		0.0	2084
41.80	43.30	40.20	SWEETWATER	16.50	53.10	2.80	413957	1073155	SB	7970	09/01/88
							25.50	1.20		0.0	2417
26.20	37.00	54.60	SWEETWATER	8.40	58.20	4.20	414012	1073132	SB	11530	09/01/88
							16.50	1.20		0.0	2102
39.70	45.10	44.30	SWEETWATER	10.60	58.40	3.00	414026	1073133	SB	8660	09/01/88
							26.10	1.20		0.0	2318
26.10	32.20	44.30	SWEETWATER	23.50	58.20	3.80	414027	1073150	SB	9770	09/01/88
							12.90	0.80		0.0	2246
16.70	42.90	54.50	SWEETWATER	2.60	74.10	4.70	414150	1091800	B	12630	09/01/88
							15.90	1.60		0.5	2093
17.00	39.80	52.70	CARBON	7.50	67.60	4.50	414405	1072111	SB	11490	09/01/88
							17.90	1.80		0.0	2129
23.80	43.40	49.60	LINCOLN	7.00	66.60	4.50	414417	1103729	SB	11230	09/01/88
							19.30	1.80		0.0	2102
20.50	41.50	49.80	LINCOLN	8.70	67.70	4.70	414432	1103752	SB	11540	09/01/88
							15.90	1.90		0.0	1976
12.10	41.20	47.70	CARBON	11.10	66.90	5.00	414500	1063000	SB	11750	09/01/88
							14.40	1.60		0.0	0
21.90	41.90	48.40	SWEETWATER	9.70	64.00	4.10	414500	1084500	SB	10670	09/01/88
							19.90	1.50		0.0	0

## Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
HOLE NO RM-1-CS				CARBON								
15.70	42.70	47.90	9.40		63.20	4.50	0.60	414630 20.90	1060705 1.40	SB	10630 0.0	09/01/88 2912
23.00	39.10	47.40	13.50	SWEETWATER	62.50	4.00	0.60	414658 18.00	1064532 1.40	SB	10310 0.0	09/01/88 2515
20.60	42.70	53.10	4.20	LINCOLN	71.90	5.10	0.40	414703 16.60	1103705 1.80	SB	12480 0.0	09/01/88 2093
15.60	42.20	52.60	5.20	LINCOLN	70.80	5.10	0.40	414710 17.00	1103650 1.50	SB	12320 0.0	09/01/88 2192
17.50	42.50	53.00	4.50	LINCOLN	70.90	5.00	0.50	414712 17.30	1103706 1.80	SB	12340 0.0	09/01/88 2129
18.90	41.30	52.30	6.40	LINCOLN	70.90	4.90	0.60	414714 15.50	1103630 1.70	SB	12280 0.0	09/01/88 2084
16.70	43.80	51.40	4.80	LINCOLN	72.10	5.20	1.60	414720 15.20	1103640 1.10	SB	12640 0.0	09/01/88 2210
15.40	42.70	52.80	4.50	LINCOLN	70.80	5.00	0.40	414726 17.50	1103650 1.80	SB	12210 0.0	09/01/88 2336
16.00	29.30	33.90	36.80	CARBON	44.90	3.40	0.60	415051 13.20	1073052 1.10	SB	7620 0.0	09/01/88 2804
HOLE NO RM-1-CS				CARBON								
34.40	42.80	37.70	19.50		49.20	3.20	0.30	415155 26.40	1061650 1.40	SB	7410 0.0	09/01/88 2840
11.30	38.40	49.30	12.30	CARBON	66.30	4.60	0.50	415212 14.70	1064027 1.60	SB	11350 0.0	09/01/88 2147
10.70	43.10	45.40	11.50	CARBON	66.70	5.10	0.80	415230 14.40	1063000 1.50	SB	11930 0.0	09/01/88 0
12.60	42.00	51.80	6.20	CARBON	71.90	4.80	0.70	415230 14.90	1063730 1.50	SB	12380 0.0	09/01/88 0
10.50	40.00	55.30	4.70	CARBON	69.40	4.30	0.30	415230 20.30	1064500 1.00	SB	11540 0.0	09/01/88 0
14.40	36.90	52.80	10.30	CARBON	67.10	4.30	0.50	415310 16.70	1064925 1.10	SB	11440 0.0	09/01/88 2264
10.10	41.40	51.60	7.00	CARBON	71.60	5.00	0.70	415312 13.90	1064002 1.80	SB	12400 0.0	09/01/88 2129

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
13.80	38.60	51.40	10.00	CARBON	67.20	4.50	0.50	415338	1064806	B	11540	09/01/88	
								16.90	0.90		0.0	2120	
16.00	40.80	54.60	4.60	CARBON	71.40	4.80	0.50	415348	1064831	B	12120	09/01/88	2426
								17.70	1.00		0.0		
12.30	38.20	53.80	8.00	CARBON	71.20	4.80	0.60	415354	1063823	B	12340	09/01/88	
								14.10	1.30		0.0	2111	
RIMROCK STRIP MINE													
14.60	37.80	50.00	12.20	CARBON	64.30	4.20	1.30	415355	1063804	SB	10830	09/01/88	2183
								16.50	1.50		0.0		
11.30	45.20	48.70	6.10	CARBON	73.30	5.50	0.50	415403	1064550	B	12800	09/01/88	
								13.10	1.50		0.0	2120	
12.40	44.70	45.30	10.00	CARBON	68.20	4.90	1.40	415410	1063039	B	11930	09/01/88	
								14.00	1.50		0.0	2129	
12.50	36.50	54.00	9.50	CARBON	68.70	4.60	0.70	415435	1064750	SB	11770	09/01/88	
								15.10	1.40		0.0	2246	
14.10	34.60	53.90	11.50	CARBON	66.50	4.60	0.50	415440	1064935	SB	11360	09/01/88	
								15.70	1.20		0.0	2354	
10.30	43.90	45.20	10.90	CARBON	67.90	5.10	0.80	415500	1063243	SB	11920	09/01/88	
								13.70	1.60		0.0	2192	
13.90	40.20	53.40	6.40	CARBON	70.60	4.60	0.60	415510	1064535	SB	12000	09/01/88	
								16.30	1.50		0.0	2156	
11.20	46.10	45.70	8.20	CARBON	69.10	5.10	1.10	415535	1063040	B	12200	09/01/88	
								14.70	1.80		0.0	2282	
10.20	40.30	52.20	7.50	CARBON	69.50	4.80	0.70	415605	1064650	SB	12090	09/01/88	
								16.20	1.30		0.0	2120	
10.60	41.80	53.30	4.90	CARBON	73.30	5.30	0.80	415622	1063146	SB	12870	09/01/88	
								14.00	1.70		0.0	2084	
7.10	31.00	37.80	31.20	CARBON	51.80	3.80	0.40	420020	1064720	SB	8950	09/01/88	
								12.00	0.80		0.0	2624	
29.90	35.80	49.60	14.60	CARBON	64.30	4.50	0.60	420030	1064840	SB	11190	09/01/88	
								14.40	1.60		0.0	2318	
HOLE NO RM-1-CS													
29.20	42.20	44.00	13.80	CARBON	56.20	3.20	0.40	420340	1065945	SB	8550	09/01/88	
								25.30	1.10		0.0	2912	

## Coal Field Information Printout for: WY - Wyoming

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbm	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
JOHNSTON MINE															
14.80	45.30	45.10	9.60	65.50	D161312	4.80	0.80	425230	1054500	SB	11170	09/01/88	0		
								18.50	0.80		0.0				
20.70	44.50	35.70	19.80	57.90	D171837	4.40	0.60	430138	1054940	SB	9900	09/01/88			
								16.50	0.80		0.0			2147	
CONVERSE															
19.50	47.40	41.70	10.90	64.40	D171839	4.90	0.90	430244	1055012	SB	11020	09/01/88			
								17.20	1.70		0.0			2039	
CONVERSE															
22.70	45.10	42.20	12.70	62.40	D171838	4.80	0.60	430301	1055018	SB	10720	09/01/88			
								18.70	0.80		0.0			2138	
CONVERSE															
17.10	44.30	50.60	5.10	69.60	D166180	4.90	0.50	433000	1051500	SB	12000	09/01/88	0		
								18.80	1.10		0.0				
CAMPBELL															
22.50	44.90	49.80	5.30	69.70	D165593	4.90	0.40	433952	1051616	SB	11950	09/01/88			
								18.70	1.00		0.0			0	
CAMPBELL															
27.80	45.40	49.90	4.70	70.10	D165600	5.00	0.40	434022	1051452	SB	12150	09/01/88	0		
								18.80	1.00		0.0				
JOHNSON															
17.30	30.70	30.70	38.60	37.80	D179875	2.80	7.90	435005	1060335	SB	6570	09/01/88			
								12.40	0.50		0.0			2039	
JOHNSON															
19.40	31.80	28.80	39.40	40.50	D179876	3.00	4.80	435055	1060405	SB	7030	09/01/88			
								11.70	0.60		0.0			2057	
CAMPBELL															
14.50	40.50	52.00	7.50	68.40	D177022	4.50	0.50	440035	1052230	SB	11500	09/01/88			
								17.90	1.20		0.0			2066	
CAMPBELL															
28.30	45.40	45.70	8.90	66.40	D178089	4.90	1.30	440340	1053350	SB	11430	09/01/88			
								16.90	1.60		0.0			2336	
CAMPBELL															
26.20	45.50	47.30	7.20	68.70	D160988	5.30	0.80	440548	1052230	SB	11950	09/01/88	0		
								17.10	0.90		0.0				
CAMPBELL															
29.20	44.80	50.30	4.90	70.60	D163521	5.00	0.60	440553	1052234	SB	12190	09/01/88	0		
								17.90	1.00		0.0				
CAMPBELL															
22.60	42.50	51.20	6.30	69.90	D171826	5.20	0.50	440555	1052233	SB	12030	09/01/88			
								16.90	1.20		0.0			2183	
CAMPBELL															
27.10	43.20	49.30	7.50	67.90	D160987	4.90	0.40	441628	1052328	SB	11700	09/01/88	0		
								18.30	1.00		0.0				
CAMPBELL															
27.20	46.50	42.90	10.60	65.40	D171830	4.80	1.10	441647	1052319	SB	11370	09/01/88			
								17.10	1.00		0.0			2192	

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash				Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
29.90	45.80	46.50	7.70	CAMPBELL	68.90	4.50	0.40	441649	1052328	SB	11670	09/01/88
								17.40	1.10		0.0	2084
WYODAK MINE												
10.40	45.70	44.30	10.00	CAMPBELL	65.60	5.00	1.00	441700	1052334	SB	11470	09/01/88
								17.50	0.90		0.0	0
21.90	43.00	51.60	5.40	CAMPBELL	70.30	5.10	0.80	441725	1052332	SB	12290	09/01/88
								16.60	1.80		0.0	2138
HOLE NO B-1												
22.70	34.40	29.50	36.10	JOHNSON	44.00	3.60	0.50	442112	1064135	SB	7490	09/01/88
								15.20	0.60		0.0	2282
30.90	44.40	48.40	7.20	CAMPBELL	67.10	5.00	1.00	442540	1055100	SB	11510	09/01/88
								18.70	1.00		0.0	2102
37.10	48.10	42.80	9.10	CAMPBELL	62.80	4.40	1.10	443250	1054955	SB	10370	09/01/88
								21.50	1.10		0.0	2462
29.50	45.00	47.50	7.50	CAMPBELL	64.40	4.60	2.80	443340	1055530	SB	10920	09/01/88
								19.30	1.40		0.0	2246
34.60	49.00	42.70	8.30	SHERIDAN	58.90	4.10	0.80	443908	1063138	SB	9460	09/01/88
								25.90	2.00		0.0	0
36.80	48.60	35.30	16.10	SHERIDAN	52.20	3.30	0.90	443909	1064412	SB	7800	09/01/88
								25.90	1.60		0.0	0
38.70	50.10	39.30	10.60	SHERIDAN	56.00	3.60	0.70	443956	1063408	SB	8650	09/01/88
								27.10	2.00		0.0	0
36.50	48.20	43.60	8.20	SHERIDAN	59.40	3.70	0.60	444250	1064216	SB	9390	09/01/88
								26.20	1.90		0.0	0
37.10	50.40	41.80	7.80	SHERIDAN	58.40	3.80	1.30	444323	1064322	SB	9240	09/01/88
								26.30	2.40		0.0	0
40.70	47.20	36.40	16.40	SHERIDAN	51.20	3.30	1.00	444326	1064112	SB	7860	09/01/88
								26.20	1.90		0.0	0
HOLE NO RM-7												
41.50	43.20	48.40	8.40	CAMPBELL	66.30	4.40	0.70	444330	1053625	SB	11250	09/01/88
								19.50	0.70		0.0	2255
41.80	49.10	39.00	11.90	SHERIDAN	55.20	3.40	0.90	444330	1063421	SB	8440	09/01/88
								25.90	1.70		0.0	0
40.30	49.20	42.40	8.40	SHERIDAN	59.00	3.70	1.30	444451	1064350	SB	9400	09/01/88
								25.80	1.80		0.0	0

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
22.40	44.90	44.30	44.30	CAMPBELL	10.80	59.90	D164818	0.60	444610	1052624	SB	13250	09/01/88
									23.70	1.20		0.0	0
HOLE NO 76-103													
27.70	36.00	30.40	33.60	CAMPBELL	33.60	47.80	D186993	2.20	444719	1053321	SB	8390	09/01/88
									11.70	0.80		0.0	2264
HOLE NO RM-1-CS													
31.50	43.20	45.90	10.90	CAMPBELL	10.90	63.60	D176630	0.70	444740	1053150	SB	10740	09/01/88
									19.60	1.00		0.0	2093
HOLE NO RM-2													
29.20	40.80	40.40	18.80	CAMPBELL	18.80	58.80	D177704	0.80	444743	1053238	SB	9920	09/01/88
									16.60	0.70		0.0	2201
HOLE NO RM-5													
34.00	41.10	42.70	16.20	CAMPBELL	16.20	61.50	D177715	0.90	444756	1053723	SB	10450	09/01/88
									16.20	0.90		0.0	2201
HOLE NO RM-4-CS													
31.60	43.40	47.80	8.80	CAMPBELL	8.80	66.50	D176799	0.70	444802	1053530	SB	11390	09/01/88
									18.30	1.00		0.0	2237
33.20	46.90	49.20	3.90	SHERIDAN	3.90	64.10	D169059	2.10	444816	1063426	SB	10730	09/01/88
									23.60	1.80		0.0	0
HOLE NO 76-105													
34.60	42.80	47.30	9.90	CAMPBELL	9.90	64.90	D187005	0.60	444819	1053336	SB	10930	09/01/88
									19.00	1.10		0.0	2345
HOLE NO RM-1-CS													
31.60	43.40	43.90	12.70	CAMPBELL	12.70	62.70	D176502	0.70	444841	1053530	SB	10470	09/01/88
									18.40	1.00		0.0	2156
18.70	42.10	44.70	13.20	CAMPBELL	13.20	60.10	D164626	0.40	444849	1052703	SB	13460	09/01/88
									21.00	1.10		0.0	0
HOLE NO 76-108													
28.30	42.30	34.00	23.70	CAMPBELL	23.70	56.00	D186987	1.10	444856	1053454	SB	9950	09/01/88
									13.50	1.00		0.0	2390
HOLE NO RM-6													
30.90	41.80	45.20	13.00	CAMPBELL	13.00	62.80	D177730	0.70	444930	1053835	SB	10670	09/01/88
									18.10	1.00		0.0	2219
25.80	45.10	51.50	3.40	SHERIDAN	3.40	63.50	D165045	4.60	445020	1064626	SB	10820	09/01/88
									21.90	2.20		0.0	0
24.70	45.20	47.00	7.80	SHERIDAN	7.80	61.50	D165043	2.00	445020	1064635	SB	10310	09/01/88
									22.50	1.60		0.0	0
27.60	43.50	51.70	4.80	SHERIDAN	4.80	65.30	D165046	3.00	445034	1064504	SB	11150	09/01/88
									20.10	2.30		0.0	0
32.90	50.10	42.90	7.00	SHERIDAN	7.00	57.60	D165044	1.80	445230	1065208	SB	11950	09/01/88
									27.10	2.40		0.0	0



Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BIG HORN MINE, TIPPLE SAMPLE													
18.70	40.80	54.20	5.00	SHERIDAN	72.00	D161320	4.90	0.60	445230	1065230	SB	13280	09/01/88
									16.30	1.20		0.0	0
SHERIDAN													
18.90	45.10	44.30	10.60	SHERIDAN	58.00	D164633	3.80	2.80	445356	1064452	SB	9360	09/01/88
									23.30	1.70		0.0	0
SHERIDAN													
21.10	42.00	50.60	7.40	SHERIDAN	69.60	D171840	4.90	0.80	445400	1065835	SB	12120	09/01/88
									16.00	1.30		0.0	2093
SHERIDAN													
19.10	35.00	37.90	27.10	SHERIDAN	52.00	D171845	4.10	2.30	445402	1070559	SB	9120	09/01/88
									13.30	1.20		0.0	2192
WELCH STRIP MINE													
17.70	47.40	46.40	6.20	SHERIDAN	68.60	D164650	5.40	1.80	445408	1070550	SB	12130	09/01/88
									16.50	1.50		0.0	0
SHERIDAN													
23.80	44.10	48.70	7.20	SHERIDAN	62.00	D164628	3.10	0.50	445903	1064914	SB	9380	09/01/88
									25.40	1.80		0.0	0

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